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Journal of the Minnesota State Medical Association, Southern Minnesota Medical Association, Northern Minnesota Medical Association, Minnesota Academy of Medicine and Minneapolis Surgical Society

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EDITING AND PUBLISHING COMMITTEE

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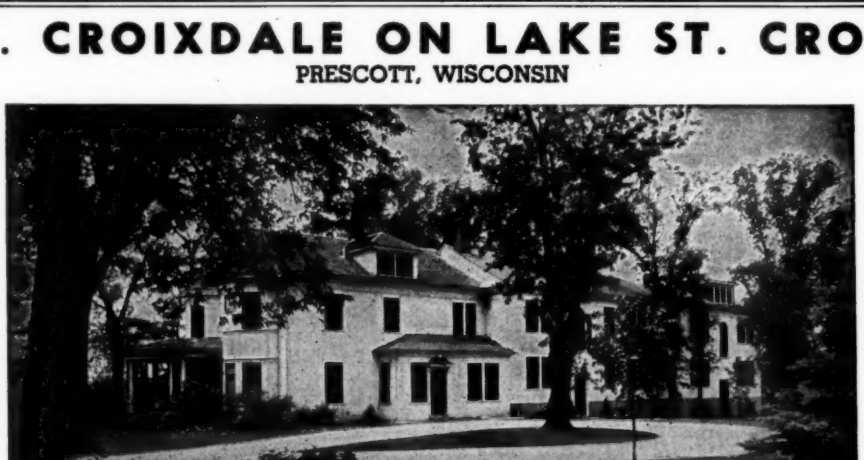

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Tel. 39 and Res. 76

NEUROPSYCHIATRISTS
Hewitt B. Hannah, M.D.
Joel C. Hultkrans, M.D.
Howard J. Laney, M.D.
511 Medical Arts Building
Minneapolis, Minnesota
Tel. MAin 1357

SUPERINTENDENT
Dorothy M. Most, R.N.
Prescott, Wisconsin
Tel. 69

Minnesota Medicine

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Volume 31 July, 1948 No. 7

DISTRIBUTION OF GENERAL PRACTITIONERS AND SPECIALISTS

WILLIAM DUNCAN, M.D.

Webster, South Dakota

TO THIS audience it should be unnecessary to report that there is a growing interest in the present problems and the future of the general practitioner.

Attention to this important subject no doubt has been aroused chiefly by two things:

1. The diminishing number of general practitioners in rural areas, notably in the small towns which in former years had one or more physicians.

2. The relatively rapid increase in the number of certified specialists, and also the large number of medical students and physicians discharged from the armed forces who have indicated their intentions of becoming specialists.

There are at present sixteen approved examining boards in medical specialties, and some of these now provide for examinations in subspecialties. As of March 1, 1947, a total of 28,476 certificates had been awarded by the various boards. This figure includes those who have died and those who have retired from practice. However, the "Directory of Medical Specialists" lists 24,028 specialists certified prior to November, 1945, and this figure represents only those living at the time of publication in 1946, although it does include those retired from active practice. On the other hand, only two of the sixteen boards were incorporated prior to 1930, so it should be fair to assume that with the numbers added since November, 1945, there are approximately 25,000 living and active certified specialists in the United States. A recent estimate from the American Medical Association indicates that the total number of practicing physicians is 160,000.

In other words there is one specialist for each 6.4 physicians in this country, and that ratio is evidently getting larger.

From March 1, 1946, to the same date in 1947, 2,404 certificates in specialties were awarded. The number of medical school graduates during a like period, June 1, 1946, to June 30, 1947, was 6,389 (this figure represents a period of thirteen months and includes ten schools which graduated two classes during that time, hence is relatively larger than an average year). Even so, the present ratio, as indicated by these latest figures, shows that for each specialist certified there were only 2.6 medical students graduated.

These figures are not being given necessarily to prove anything in particular, but they do show a definite, if not overwhelming, trend toward specialization, and everyone cannot be a specialist if we are to maintain our present concepts of the practice of medicine.

At the last annual assembly of the Omaha Mid-West Clinical Society in October of this year, a round-table discussion was held on the subject, "What is being done about the present problems and the future of the general practitioner." Among other subjects, overspecialization was discussed, and some very good points on this were brought out by Mr. M. C. Smith, executive secretary of the Nebraska State Medical Association.

The same subject was discussed at a recent meeting of the Association of American Medical Colleges. It was shown there that at least some of the specialty boards are becoming quite con-

Presidential Address presented at the North Central Medical Conference, November 23, 1947, Saint Paul, Minn.

cerned about the present trend and are hoping that in some way it might be stemmed to a certain extent.

From what has been said it would seem that we are facing a problem of overspecialization, or too many specialists. On the other hand perhaps this could rather be looked upon as a problem of too few general practitioners. We all know that there is still a great demand for specialists, especially in certain categories and in certain parts of the country. There are definitely not too many specialists in South Dakota; quite a few more, properly distributed or located, could be very useful, not only to themselves, but to the general practitioners now there and to what, after all, is the most important of all, the people of South Dakota. (This should not be interpreted to mean that the people of South Dakota are *suffering* from lack of medical or specialists' care, but to many of them it not only entails great inconvenience, but also, to my way of thinking, unnecessary hardships in order for them to reach certain types of specialists—notably ophthalmologists, otolaryngologists and psychiatrists.)

Consequently, with specialists as well as general practitioners, perhaps the really great problem is that of proper distribution.

This brief discourse was in no way intended to state a problem and then point out the solution.

However, a few suggestions pertaining to the solution will be offered:

1. The AMA or the Advisory Board for Medical Specialties should make an attempt to determine the optimum number of specialists needed. This, of course, should include not only the number of each type needed, but also (and of the utmost importance) *where* they are needed.

Naturally this would be quite an undertaking, but it should not be too difficult. The armed forces had definite, even though misguided, ideas about how many physicians they should have for each 1,000 men. Also Procurement and Assignment Services worked out their problems on the basis of ratios, one physician for each 1,500 civilians.

2. The same thing should be done concerning general practitioners, that is, determine the optimum number needed and again *where* they are needed.

3. This information should always be kept up to date, and it should also be given great publicity among medical students. In fact, at least a few lectures on the subject could well be given to the senior class, with great emphasis being placed on where they are needed.

4. Medical schools might very well arrange their curricula to allow for considerable more time in teaching medical history and ethics. For example, how many medical students have been taught the precepts of Hippocrates, especially the following one? "Sometimes give your services for nothing, calling to mind a previous benefaction or present satisfaction. And if there be an opportunity of serving one who is a stranger in financial straits, give full assistance to all such. For where there is love of man, there is also love of art. For some patients, though conscious that their condition is perilous, recover their health simply through their contentment with the goodness of the physician. And it is well to superintend the sick to make them well, to care for the healthy to keep them well, but also to care for one's own self, so as to observe what is seemly." It would not hurt to point out that medicine had its origin in the ancient temples, and although the teaching of medicine is now practically completely separated from religion, it is still based entirely on service to mankind. It has been said, "The right to serve is man's one freedom that must never be denied. For out of free men's devotion to their self-appointed tasks have come the great gifts to all mankind."

There could be nothing wrong with attempting to instill in these students more of the higher values in life, and especially to keep before them this question, "Where am I needed?"—not just "Where do I want to go?"

5. As for the specialty boards, they might consider two things. One, encourage these young men to go out into general practice for a while. Arrange in some way to give them some credit for a few years in that type of work. Do not restrict them on age. Enough of them will no doubt return to become specialists, and perhaps a few of them will learn to love their work and the people they serve so well that they will stay in general practice. Those who go out and then return might even become better specialists than otherwise, for I am sure that quite a few of our most eminent specialists started out in general practice.

(Continued on Page 755)

COMMUNITY LEADERSHIP BY PHYSICIANS

THOMAS A. HENDRICKS
Chicago, Illinois

ABOUT the most delightful experience that life brings is a visit to one's birthplace. Today, as a representative of the Council on Medical Service of the American Medical Association, I am enjoying the nostalgic, though vicarious, thrill of a homecomer, for it was here at the North Central Conference that the idea and the propulsive force originated some four years ago, which brought the Council into being.

As I stand here, I see many who first sponsored the idea and then fought it through the House of Delegates. Last year at your meeting we reviewed a bit of the history of that battle. This year we hope in some way to express the gratitude that a son owes to a parent, and to have a family discussion of the problems facing the Council on Medical Service as it comes of age and perhaps determine just what function that Council can best perform for American medicine.

It was here too that the Council's medical regional conference was born, for it was your group which held the first modern medical economic regional conference. These regional conferences, developed nationally by the Council, have become recognized as functional units of American medicine, and have done much to make national, state and county medical societies efficient, effective, vital, driving forces in the medical life of America. These regional conferences have kept the physicians of America informed as to what the AMA is doing, but, far more important, they have kept the AMA in touch with the desires, wishes, hopes, ideas and ideals of the individual physician.

Here lies the source of the Mississippi River, at the start merely a trickle. By the time that trickle reaches the sea it has become a mighty giant, our Father of Waters—Old Man River—fertilizing and influencing much of our national life. So, our regional conferences, which started here as small, informal get-togethers, attended at first by a handful of state society leaders, have grown into conferences of formidable force and influence.

Not only have these conferences grown in size, they have become enlarged in concept, and in some regions have attained a status of permanency. The Middle Atlantic states have developed a regional organization with a constitution. At the recent Southeastern Regional States session, where the health problems of twenty million citizens of eight southern states were discussed, a new approach to the regional conference was developed—participation in these round-table discussions by representatives of the public, *thought leaders* of that region, leaders of thought on rural, educational, industrial problems. From this conference has developed an interim committee which is to map out a program for the health of the citizens of that region and leave it up for action to the various state societies composing the region.

The Board of Trustees has asked the Council to correlate and integrate, insofar as possible, regional conferences on rural health and industrial health with the medical service conferences. This is being done wherever possible.

It is my personal feeling that wherever permanent organizations such as yours and that of the New England states exist, our conference be made a part of your conference whenever you desire us to participate.

I have mentioned the phrase "thought leaders." By that we mean the molders of opinion in each community. It is with this group that the medical societies should act, and action can only be effective if the local medical societies are the thought leaders and opinion molders in matters of community health.

To me, the keenest and at the same time the most jolting and disheartening criticism that has appeared in all the multitude of recent studies and surveys which have abounded with detracting comments in regard to the medical profession is not found in the voluminous records of the Wagner-Murray-Dingell bill hearings, nor statements by Boas, Falk or Michael Davis. All these are of minor importance, for American medicine and the American people can and will in time sift out the good from the bad, the effective from the emotional, and continue to do what medicine always has done in the past—give the American

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Read at the North Central Medical Conference, November 23, 1947, Saint Paul, Minnesota.

Mr. Hendricks is secretary of the Council on Medical Service, American Medical Association.

people an increasingly expert and efficient medical service, the best received by any nation in any time in the world's history.

The remarks which disturb me come from Robert and Helen Lynd in their case history study of "Middletown," *Middletown in Transition*. Of course, we were particularly interested in these studies in Indiana because "Middletown," picked as a typical American city, is Muncie, Indiana. Figures, facts and conclusions in regard to the political, social, educational, professional and business conditions and life contained in that study will interest any reader, for some of the charges against Middletown's citizens apply to almost any American community.

The Lynd's say: "A point worth noting is the loss of intellectual leadership and independence of Middletown's doctors and lawyers. Some of Middletown's most ruggedly independent thinkers in 1890 were the local doctors, judges and lawyers. These men less often speak their minds, they become to a greater extent intellectually colorless and are sticking to their last making money like the rest of Middletown's businessmen."

Perhaps we can laugh off most criticisms, but this one strikes deep into the heart of every American. You may say a doctor is a fraud, is "cracked"; you may even call him a quack, but never call him colorless! We do not believe the Lynds are correct, but if doctors are losing their intellectual leadership, their independence of thought and expression and action—their color—it causes one to worry about the shape of things to come.

I believe it was this that Dr. Buie had in mind in his unusual and beautifully written paper, "For Manners Are Not Idle."* I would like to quote for you the last two paragraphs:

> Accordingly, outstanding qualities of estimable men are these: gentleness and courage, boldness and prudence, tolerance, reverence, confidence, stability, humility, wisdom, patience and honesty. I believe not only that possession of these qualities engenders good manners but that the exercise of good manners furnishes proper soil for the cultivation of these qualities. The two elements working together, not alone, I believe, would do much to allay those twin dreads of the world today: fear and want.
>
> Finally, we, in our profession, have been reared well. The code of ethics of our organization provides that "a physician shall be an upright man, instructed in the art of healing." Furthermore, he "must keep himself pure in character and conform to a high standard of morals and must be diligent and conscientious in his studies . . . conducting himself with propriety in his profession and in all actions of life." Perhaps no other group is in a more favorable position to exemplify the union of good manners and good faith.

*Presidential Address, Louis A. Buie, M.D., President Minnesota State Medical Association, delivered at the ninety-fourth annual meeting banquet, July 1, 1947.

Endowed with a formal education and background beyond that available to any other group in the community, experienced in daily intimate contacts with their fellow men as are no other individuals, the members of the medical profession are expected to have a conception of affairs, an analytical power, an outspoken independent viewpoint that gives warmth, expression, humor, philosophy and "color" to their communities. The physician more than any other person should have a decisive influence on the life, the thinking and the daily habits of the people.

Whether it be Middletown, Indiana or Iowa; Middletown, Wisconsin or Minnesota; or Midland, South Dakota—Middletown must never lose the grand tradition of personal, independent action and thought which we hope and pray characterizes the physician. The American medical profession must never backslide from the fearlessness and courage of its men who told their world what they thought and their world listened and molded its action accordingly.

Groundwork has been laid by American medicine for a great development in the health services for the American people. To state and county medical societies goes the credit for this progress. Most societies resume their regular schedule of meetings in the fall. These are essential services that each state and local society should supply for American medicine to perform with community leadership:

Basic Records.

Each society should have for immediate reference an accurate evaluation of the medical personnel and facilities in each of its communities. Definite facts must be had to answer many of the sweeping and often unfounded claims by those who advocate that the government take over medical practice.

Health Councils.

Many communities have found local health councils a medium through which physicians with other interested and responsible groups may further the health programs of their communities. The Council on Medical Service has prepared a brochure suggesting ways of forming these health councils. This is a preliminary

release on this subject and will be followed by further reports as reactions are received and evaluated in the light of actual experience as to the value of health councils. If you desire this publication, write to the Council on Medical Service.

Public Relations.

The American Medical Association has adopted a program for activity to bring these health services to the public:

Ten Point Program.—An important point of this program is the development of voluntary health insurance as opposed to compulsory sickness insurance.

"National Health Policy."—An equally important point in the Ten Point Program is the care of the indigent. A resolution on policy to be followed in meeting this problem was adopted by the House of Delegates at the Atlantic City Session. The "National Health Policy" was developed by the New Jersey State Medical Association and the principles of this program set up in New Jersey have now become a further guide for leadership by the profession. The Board of Trustees has referred the resolution to the Council on Medical Service for action. In considering this for state action, it may be well to keep in mind the development of local health councils.

Professional Relations.

Most important of all to a functioning state or local medical society is good professional relations as distinguished from public relations. Fundamental to good professional relations must be a good feeling and understanding among the individual physicians composing the medical society. The seven deadly sins to be avoided to have a functioning local society and the seven characteristics to offset them are: Inertia, offset by Enterprise; Reaction, replaced by Progress; in place of Cliques, Friendship; not Discord, but Harmony; less Provincialism and more Vision; instead of Smugness, Leadership; and to replace Defeatism, Courage.

Dr. Walter Martin's statement of the obligation and necessity for community leadership at the Southeastern Conference is a good one: "National organizations can carry on studies, accumulate data, establish standards and formulate plans but state and local societies to a large extent must implement these policies. Medical plans for a community must fit into community planning as a whole and into the community way of life, and they must be designed primarily for the benefit of the people and not the profession. Plans for improving medical care should be on a community-wide basis, should receive their primary impetus and sustained force from the community."

The Council on Medical Service, which as I said before had its origin here in this North Central Conference, has become an important instrument. The Council serves as the "sparky," the pilot planner for medical organization. The frankest and perhaps the most forthright statement concerning the function of the Council has not appeared in any formal report of the Council. It was made by Dr. Adson, vice chairman of the Council, at Atlantic City.

"A number of years ago some of us were the spearhead for a progressive movement within the American Medical Association. This Council is, to a great extent, the result of that movement. At that time we had certain things in mind for the Council to do. In general, our purpose was to implement the functions and activities of the AMA. But there were certain definite lines of activity which we felt needed immediate attention.

"One was to present the AMA to the state medical societies. In order to do this, we set up district meetings and called in officers and committeemen from the various states. . . .

"One of our first developments in the Council was the News Letter. . . . The headquarters office has developed what they call a Secretary's Letter.

"Another activity that we have entered into is the promotion of prepayment plans. We started the ball rolling in this and were charged with the promotional activity. AMCP (Associated Medical Care Plans), organized under our instigation, has now come along and taken over many of the details having to do with prepayment plans. . . . We must realize that these things are bound to happen as we create, prove and pass on or lose functions to others.

"We have tried to stimulate rural health, and now the House of Delegates has created a committee on rural medical service whose function it is to consider and develop plans along that line.

"Some time ago we discussed indoctrinating medical students in their junior and senior years of medical school. We spent some time discussing the creation of an Association of Medical Students, granting the students an associate membership, and making the *AMA Journal* available to them. Although the Council was unsuccessful in bringing this to pass, the suggestion was made by this year's incoming president that just such a policy be established, and his suggestion was approved by the House.

"If the Council is going to live and grow, and if we are going to hold the confidence of the profession that we have had, we cannot go to sleep. I think each one of us will have to keep his ears to the ground to get the pulse of what is going on around us. I feel that if the Council is going to live and contribute to medicine as we have attempted to do, we cannot sit still."

In this spirit of pioneering, in conclusion, I am going to hazard the following five proposals for your reaction. They have not been discussed

formally either by the Council or the Board of Trustees. Your criticism, comments and suggestions will be appreciated:

1. The publication of a book *Best Talks on Medical Economics for 1947*. Doctors are good pamphleteers, but they don't have time to write full-length books.

2. Appointment of subcommittees to put into action each point of the Ten Point Program of the American Medical Association.

3. Better use of local committees on medical service. Other subcommittees could be created under the Council, such as a subcommittee on voluntary health insurance, dealing with the entire field of prepayment; a subcommittee on professional relations, having to do with the news letters and the regional conferences. Then, in order to make this reorganization effective, that the state medical societies be urged to create or reactivate their committees on medical service. (Some of these are termed committees on medical service and public relations.) Perhaps even the county medical societies could be asked to create similar committees. From these state committees doctors would be selected to serve on the subcommittees of the Council on Medical Service. In this way we could maintain direct contact with the thoughts and ideas of both the state and county medical societies so that we might better assist them in carrying on effective community leadership. This type of reorganization would make the regular regional conferences more effective and would provide the Council with more continuous contact with both the state and county medical societies. While the Council on Medical Service, as it is now constituted, represents all parts of the United States, reorganization would expand this representation and provide for an even better distribution of thoughts and ideas.

4. Reorganization of the Council on Medical Service so as to have the following divisions and departments: (1) extension of medical care, (2) prepayment, in all forms, and (3) professional relations.

At Leavenworth and at the Army Staff College in Washington, studies are made and plans formulated for the defense of America in any eventuality: How would America be defended if the West Coast were invaded? What disposition of forces would be necessary if the East Coast were in the hands of the enemy? What plan of action could best be taken if invasion forces moved in through Mexico or Canada?

Teams are at work on each problem. Could not groups be set up to do the same for medicine? One group could work on each problem. How may the best medical care be made available if medicine were able to lay out its health program unhampered?

How may the individual integrity of the physician best be maintained if inroads are made by the Children's Bureau, by liberalization of the VA program to include dependents, which would make the government responsible for some forty million Americans?

What does all this add up to? Just this: Like Omar Khyam we keep coming out the same door that we went in—the county medical society—a door which must swing wide open to welcome all those who have health problems, and from whose portals must emerge men who are willing in these critical days to assume community leadership.

RATIO OF DISEASE TO INCOME

It will be noted that families with an income below $1,000 per year have nearly four times as much disability from tuberculosis, nearly three times as much disability from orthopedic impairments, and approximately twice as much disease and nervous disease as families with incomes over $5,000. For relief families, the ratio rises to nearly ninefold for tuberculosis, and fourfold for orthopedic impairments, between threefold and fourfold for rheumatism and digestive diseases. Considering all causes of disability together, the group with incomes under $1,000 shows 66 per cent more disability and the relief group shows 155 per cent more than the families with incomes over $5,000.—C. E. A. WINSLOW, D.Sc., Am. J. Pub. Health, Jan., 1948.

CAN THE LOCAL HEALTH CO-OPERATIVE FIT INTO THE VOLUNTARY PREPAYMENT MEDICAL CARE MOVEMENT?

L. S. KLEINSCHMIDT
Chicago, Illinois

IT SEEMS to me that a discussion of this subject is very fitting in the North Central Medical Conference here at Saint Paul. The six states represented in the Conference—Iowa, Minnesota, Nebraska, North Dakota, South Dakota and Wisconsin—are the center of an area where much impetus has been gained in the co-operative and consumer-sponsored movements, particularly in the rural phases, although they were not the first to undertake group action in attempting solutions to some of their problems. There are 1,625 local co-operative associations of all types reported in these states.

Again, in view of the forward-looking suggestions and actions that have served a real purpose in assisting to unify the thinking of the medical profession coming, I am told, from this conference in the past, it seems timely to discuss this subject today.

The problems suggested by this subject are a definite part of the medical profession's public relations problem and mesh with the other subjects on this program especially if our today's subjects are slightly restated as follows:

1. Physician's relationship.
   (a) With public agency medical care.
   (b) With veterans' medical care.
   (c) With consumer-sponsored medical service.
2. Meeting rural health service needs.
3. Establishing local health councils.
4. Leadership by physicians.

In reviewing the over-all relationship, this question is logical, "Can the local health co-operative fit into the voluntary prepayment medical care movement?" First, let us consider how new the consumer-sponsored medical service plans are and when the medical profession recognized their activities as voluntary prepayment plans?

The oldest plan so far reporting to us is the French Mutual Benevolent Society of San Francisco, California, organized in December, 1851. However, noticeable expansion did not develop until in the early 1930's. Approximately two-thirds of all consumer-sponsored medical service plans have been developed in the past nine years.

The Bureau of Medical Economics took notice of this development and in April, 1937, published an article in the *Journal of the American Medical Association* that was distributed as a reprint. This statement was made: "The co-operative movement is not new, although only in recent years has it begun to attract national attention." In 1941, the same bureau reported: ". . . There has been no opposition to the use of the principles of insurance purely as a means of meeting the cost of medical care when there was no interference with the quality of service."

The House of Delegates of the American Medical Association in 1943 established the Council on Medical Service and enumerated functions which read in part: "To make available facts, data, and medical opinions with respect to timely and adequate rendition of medical care to the American people; to investigate matters pertaining to the economic, social and similar aspects of medical care for all the people and to study and suggest means for the distribution of medical service to the public consistent with the principles adopted by the House of Delegates."

In 1945, the House of Delegates approved "a continuous survey of all voluntary plans for hospitalization and illness to determine their adequacy in meeting needs and maintaining continuous improvement in quality of medical service." During the same meeting of the House of Delegates, the Committee on Rural Medical Service reported in part: "Prepayment plans for medical care and for hospitalization have the approval of many farm groups; however, some of them feel that such plans should be consumer-operated. Such plans should be made available to farm groups as early as experience permits."

Additional discussion of co-operatives on the part of the medical profession occurred from time to time, reaching its height of interest following the conference of co-operative and consumer-sponsored health service plans held at Two Harbors, Minnesota, in August, 1946. During this conference, a national organization of these

Read at the North Central Medical Conference, November 23, 1947, Saint Paul, Minnesota. Mr. Kleinschmidt is a member of the Council on Medical Service of the American Medical Association.

plans, the Co-operative Health Federation of America, was organized.

In December, 1946, the Council on Medical Service reported it "is gathering information and data relative to the medical co-operative movement throughout the country." The Committee on Rural Medical Service reported that "the development of co-operative associations and other consumer-controlled groups for provision of medical care has received considerable attention. This is an interesting experiment in the rural effort to do something constructive from the point of view of the consumer. The medical profession should be concerned in all these plans with the view that a high level of medical care be supplied." The House of Delegates approved the study of these plans. It recognized that while there is some difference of opinion regarding the establishing of consumer co-operative medical care programs, nevertheless they are functioning in certain areas, and stated that in order to ensure good medical care certain basic principles be formulated.

Consumer-sponsored programs then date back ninety-six years in the United States. The American Medical Association has been particularly interested in their activities for the past ten years, the period of their greatest growth. The second point to consider may well be the size of these plans and where they are located.

In our discussion of these plans may I point out that the source of information is from the plans themselves. We expect to continue the study to check the information we have, and to obtain additional information at a later date from physicians in areas where these plans are in operation.

According to information so far gathered, we have knowledge of seventy-nine consumer-sponsored local health service plans. We have leads out that we believe may put us in touch with additional plans. The seventy-nine plans on our list are located in twenty-seven states and the District of Columbia. They operate in industrial areas, urban areas and rural areas. Where they do operate, they are supported by labor unions, by workers in a particular industry and by farm organizations. Usually they have been built in a given area by a particular group who have, or think they have, been faced with a lack of medical facilities and personnel or with an economic problem in meeting the costs of improved medical care or both.

Forty-eight of the seventy-nine plans show a total enrollment of 674,653 persons. Of these, 428,883 are urban and 245,770 (36.4 per cent) are rural coverage. If we should assume that the remaining thirty-one plans had an average enrollment similar to those reported, then the probable enrollment in consumer-sponsored and co-operative plans would total 1,106,000 persons.

Just to help visualize this enrollment, it might be compared with the enrollment figures of medical service plans. Medical society plans have actual enrollment six times as large as the probable enrollment of these consumer-sponsored plans. If we make average allowance for the medical service plans that have not given rural enrollment figures, the total persons enrolled from rural areas is about the same for medical service plans and for consumer-sponsored plans. Stated on a percentage basis of the total enrollment for each, we find 8.3 per cent of medical service plan enrollment is composed of rural subscribers, and 36.4 per cent of the enrollment in consumer-sponsored plans in rural.

These plans seem to be of sufficient size and importance to justify the serious consideration of the medical profession, especally their potential possibilities in rural areas.

As a third consideration let us turn to some of the characteristics of these plans.

Thirty plans have reported information in sufficient detail to permit classification according to some of their characteristics. All of the thirty plans have nonprofessional boards of directors to handle the business affairs of the association. Fourteen plans (46 per cent) have a medical board or a physician's committee to plan and direct the medical practice. Eight plans (27 per cent) have a contract with a physician or several physicians responsible to the board to handle medical practice. Eight plans have indemnity contracts and make no definite arrangements for medical supervision.

As to facilities used, sixteen plans have their own hospital or clinics, and fourteen plans use existing local facilities. In the matter of facilities the plans are about equally divided.

The tendency toward the service type of contract for medical care predominates. Twenty-one plans (70 per cent) write service contracts; eight plans (27 per cent) write indemnity contracts; and one plan (3 per cent) writes a combination of both. As a matter of comparison,

ninety medical society plans are about equally divided among service contracts, indemnity contracts and a combination of both.

All plans depend on legally licensed physicians to render medical care benefits to their members, and all indicate that they offer freedom of choice of physicians. This, of course, applies to those co-operating with or employed by the plan.

There are, however, four distinct methods under which arrangements are made with the physicians to render medical care and receive payment therefor. The plans are about equally distributed between these four methods.

1. Eight plans provide cash indemnity payments to the subscriber for the amount of his medical bill as certified by his attending physician or up to an amount in a schedule of payments for services covered in the benefits. The patient pays the doctor and is reimbursed according to the terms of his insurance contract. These eight plans, with a total enrollment of 224,390, are divided into three urban plans with 91,834 persons enrolled, and five rural plans, with 132,556 persons enrolled.

The Hoosier Farm Bureau Life Insurance Company of Indianapolis is an example of the indemnity type. It is a mutual company, organized by the Indiana Farm Bureau, that writes many kinds of insurance for its members, including surgical and hospital expense. The benefits include surgical expense up to the amount named in the schedule but not to exceed $150. The reimbursement for each patient-day in the hospital is $5 for members and $4 for dependents. Operating room, anesthesia and laboratory services are not to exceed $25 for members and $20 for dependents.

The cost for man and wife is $28.80 and for a family including all dependents is $40.80. During 1946, 55 per cent of the annual premiums collected were paid out in claims. In order for a county to enroll, 75 per cent of the Farm Bureau members must join. Thirty-nine thousand persons are enrolled in Indiana under this plan.

Incidentally, the Grange in Indiana is enrolling its members by counties on a similar basis, except that the coverage offered is Blue Cross hospitalization and Blue Shield medical service. The Grange enrollment is included in rural enrollment of the medical service plan sponsored by the Indiana State Medical Association. Here is a consumer-sponsored organization co-operating with a medical society and a Blue Cross program. The cost for a family including dependents is $48.60 per year. The additional cost of $7.80 per year is offset by more benefits for hospitalization. The Grange in twelve other states is reported as now offering Blue Shield and Blue Cross benefits to its members.

2. Nine plans pay the physician on a fee-for-service basis for medical care rendered to members. The total enrollment of this group is 114,160 and is made up of two of the larger urban plans, with a total of 98,605 persons enrolled, and seven of the smaller rural plans, with a total of 15,555 persons enrolled.

The Southeast Missouri Health Service, Inc., Poplar Bluff, Missouri, is an example of this type. It was incorporated in December, 1941. After agreements and operating principles were developed and an education program carried on with the people, service was started to members on January 1, 1943. It is consumer and medical society sponsored, with a seven-member board of directors to manage the business, and a medical committee appointed by the county medical society to direct the medical practice and approve medical bills for payment. Both boards agree on the extent of benefits, the rates to be charged the families, and the method of payment. It is a project of the medical economics committee of the Missouri State Medical Association.

At present, farm families with earned incomes of $1,500 or less are eligible. Plans are under discussion for extending the program to urban residents with incomes of $2,000 or less. The benefits include general practitioner's care, surgery, and hospitalization in a ward-bed up to twenty-one days for each person in any one year. Prescribed drugs and children's dentistry have been included, but these two benefits are being discontinued.

The maximum family payment is $60 and the minimum, $30, to become a member, with 6 per cent of earned income used as a basis of payment for families earning between $500 and $1,000 per year. The cost of this program on the basis of normal local fees was $99.94 per family. This cost was met by payments from the families that averaged $36.44, from tax funds supplied through

Farmers Home Administration, which averaged $33.73, and from the professions an average of $29.77 per family on the basis of accepting pro rata amounts or granting discounts from their normal fees. This substantial contribution on the part of the medical and allied professions made it possible for this program to continue to operate.

The distribution of benefits paid for the year July 1, 1945, to June 30, 1946, was: for medical care and surgery, 41.3 per cent; hospitalization, 25.7 per cent; drugs, 16.1 per cent; reserves, 2 per cent; administrative costs, 14.9 per cent, or about 85 per cent paid in benefits.

3. Six plans render benefits through contracts with a small group of physicians on a salary basis supported by local physicians on a fee-for-service basis. This group has a total enrollment of 243,-152 persons. It is made up of four urban plans, with a total enrollment of 231,207, and two rural plans with 11,945 persons enrolled.

Since this group is largely urban, we have selected the largest one of the plans, located in New York City as an example. The Union Health Center was organized in 1913 by the International Ladies' Garment Workers Union and thirty-two locals, and started service to members in 1916.

The business is directed by a board of ten directors and the medical director. A medical council, composed of physicans and the medical director, hire the ten physicans on the staff, work out the arrangements with 100 part-time local physicians, and direct the medical activities. Union members and their dependents are eligible to receive service.

The benefits include medical care and all diagnostic services in the clinic of the Union Health Center on a service basis for union members. Surgery and hospitalization is also provided union members on an indemnity basis. These benefits cost the individual $18, with some variations between the local unions. Dependents of union members are supplied these services on the basis of reduced fees at the time medical service is received. Our reports indicate that subscribers pay 23.3 per cent of the total costs as cash payments and 55.8 per cent as employe payroll deductions paid through the local unions. The international organiaation pays 20.8 per cent, with .1 per cent from miscellaneous sources to make up the balance to cover the costs. The administrative costs of the prepayment features of the plan are absorbed by the unions and the clinic. All of the funds collected went to pay for services.

4. Seven plans have organized group practice with physicians on salary. All of these plans own their facilities. This group of plans have 36,804 persons enrolled. Two are urban plans with a total enrollment of 20,848, and five are rural plans with a total enrollment of 15,956.

As an example of this group, I wish to discuss the Farmers Union Hospital Association at Elk City, Oklahoma, organized in 1929 by the Farmers Union and Dr. Michael A. Shadid.

A board of five directors, elected by the membership, and Fred V. Shadid, M.D., medical director, manage the business and control the property of the association. A medical staff of six medical doctors and one dentist, together with the medical director, plan and carry out the medical practice, select the professional staff members and plan the budget required for benefits covered.

The benefits include medical care, surgery and hospitalization at the association's hospital. Extra fees are charged members for certain services. This extra fee for anesthesia and operating room is $20 for major operations and $10 for minor. Three dollars per day is charged for hospitalization and $3 for x-ray, et cetera.

The annual dues for a family including children is $34 and $6 additional for each dependent blood relative included in the certificate. In order to be enrolled as a member of this plan, each family must purchase a lifetime membership of $50 to apply on hospital cost and equipment.

The administrative costs of the prepayment plan are absorbed by the hospital and the Farmers Union.

Of these four types of payment arrangements discussed, the largest number of persons are enrolled under the one with full-time medical and clinic direction in co-operation with local physicians in carrying out the benefits of the plan. The one supplying medical service on an indemnity basis is the second largest, the one where local physicians co-operate on a fee arrangement is the third in size, and the one organized on a group practice basis is the smallest, having enrolled about 6 per cent of the total persons covered in these plans.

The consumer-sponsored plans are gradually undergoing revisions based on their experiences. It might be well to attempt here to enumerate some of the general characteristics and the trend of revisions observable.

1. Voluntary prepayment health service as distinguished from compulsory.
2. Variations in types of plans based on local determination.
3. Development largely with special groups in industry and on farms, which groups are faced with a health service problem which they think is not otherwise being met.
4. More or less flexible and have no fixed pattern or standards at present.
5. Trend toward more or less complete health benefits on a service basis.
6. The majority, even though they may operate on a different basis now, seem to favor group practice by physicians although their real interest centers on obtaining the service of specialists.
7. Establish own facilities in areas where there is a shortage of hospitals and clinics.
8. Lean toward salary or contractual arrangements with physicians.
9. Avoid the corporate practice of medicine (which is illegal) by "arranging to furnish medical care" for its members and not "guaranteeing to furnish the service."
10. Seek the co-operation of physicians and welcome the prospects of some type of standards being developed.

Where then "can the local health co-operative fit into the voluntary prepayment medical care movement?"

With so many local variations and personalities, it seems that "the place where they fit" requires local determination.

The jig-saw puzzle—as Charlie Crownhart has called the various types of prepayment medical care plans—needs to be fitted together. The co-operatives are part of that puzzle.

The physicians constitute the most logical group, if not the only voluntary group, which may be looked to as sufficiently interested in the puzzle of prepayment medical care and as capable of bringing it into a unity of purpose on a community basis.

DISTRIBUTION OF GENERAL PRACTITIONERS AND SPECIALISTS

(Continued from Page 746)

The other thing that specialty boards might consider is that in some respects perhaps they are too restrictive. The American Board of Surgery, for example, requires that one limit his work entirely to surgery before being eligible for certification. If that rule had been followed in the past we would have quite a few less diplomates of their board at present, and if it is held to in the future it cannot help but influence at least the distribution of competent surgeons if not their actual numbers.

In the latest volume published by the South Dakota Historical Society there is a biographical sketch of Dr. Theodore F. Riggs of Pierre. The final paragraph is a quotation from Dr. Richard W. TeLinde, chief gynecologist of Johns Hopkins Hospital: "I have known Dr. Riggs for twenty-five years, and he is an outstanding surgeon, in fact, I know of no one who does better general surgery in the broad sense than Dr. Riggs. The State of South Dakota can feel very happy that a man of Dr. Riggs' training and ability chose to spend his life in a frontier community rather than stay in one of the large cities. Since having a short professional association with Dr. Riggs twenty-five years ago, I have sent him an assistant from the Johns Hopkins Hospital almost every year. I happen to know that each one of these assistants regards Dr. Riggs as highly as I do." Dr. Riggs, of course, is not interested in becoming a diplomate of the American Board of Surgery, for he already is one. On the other hand, he would no doubt readily admit that his practice is not strictly limited to surgery, and so as of this day he would *not* be eligible to become a diplomate.

Some of the above suggestions may sound a little idealistic, but in this atomic age of international confusion and disillusionment we could all do much worse than attempt in every way to elevate our profession further and further toward the ultimate goal of American medicine: "The best medical care, made available to all the people—not only of these United States, but to all the world."

THE NEBRASKA STATE MEDICAL ASSOCIATION'S FEE SCHEDULE FOR PUBLIC AGENCIES

FLOYD L. ROGERS, M.D.
Lincoln, Nebraska

IN NEBRASKA, we are interested in our problem of public relations. We are particularly interested in the problem of the relationship between public agencies financing medical care and the medical profession. By public agencies, we mean agencies using funds derived from taxation and agencies directed by government. We are also interested in private agencies who enter the medical field, but these relations are largely private and will, to a very considerable extent, be influenced by our relationship with public agencies.

These agencies are on national, state, county, and local levels. They have, during recent years, been requesting an ever-increasing amount of medical service. In Nebraska, the profession has been asked to co-operate with public agencies to provide medical care for the categorical assistance group—old age assistance, aid to dependent children and blind; for vocational rehabilitation, maternal-child health, workmen's compensation, crippled children, veterans' aid, veteran out-patients, county and city indigents; and for inmates of city and county jails.

In every instance, these requests could be reduced to contain two fundamental questions. How can we best contact a large number of physicians for employment and *how* should they be paid? In the past, the profession in Nebraska has had no plan for dealing with these important groups.

Lacking such a plan, agencies have, of necessity, prepared plans for their own particular use. Naturally plans vary greatly. Various agencies employ physicians in various ways. These agencies pay various amounts. In the past, many agencies have employed physicians on full or part time basis. For the most part, salaries have been inadequate, considering the amount of work required. This, of course, has held taxes down but has led to inadequate services. Of recent years, these agencies have requested a more general employment of physicians. There seems to be a decreasing objection to free choice of physician and fee-for-service pay. There has come to exist in Nebraska a desire for a "fee schedule." This desire has repeatedly been expressed by members of our association and agencies, both public and private, interested in providing medical care. In general, the thought has been that a "fee schedule" would result in uniformity and fairness of fee where confusion has existed. A "fee schedule" should include a sufficiently complete listing of medical procedures to make it serviceable in the many fields where it would be used, together with fees that would be fair and average. Fees paid from public funds certainly should not exceed the usual fee in the community for private patients. Such a schedule should be acceptable to physicians and to those responsible for paying. Its general use by agencies, governmental in particular, would have many obvious advantages; and such a schedule should come as an effort of the medical profession.

Our state agencies now pay varying amounts for similar services. County fees for medical care differ to a ridiculous degree. These schedules, for the most part, have been prepared by laymen representing the agency, together with a physician or physicians employed by or particularly interested in the agency. The medical society or the profession in general has not been consulted.

In many instances, these schedules have been fair and just, seldom have the fees been excessive, and often they have been too low. When the fees are too low, doctors may react in several ways. In case the recipient is indigent, the physician, with few exceptions, accepts the responsibility and renders adequate service regardless of fee. The feeling of responsibility to those unable to pay has always been strong in the minds of physicians, although it is unreasonable to expect this responsibility for the community.

In other instances, physicians react in a less honorable manner where small fees are paid. Often devious methods are used to increase the fee. Mileage is charged for each call although several calls are made on one trip. Taking the temperature and blood pressure is called a com-

Read before the North Central Medical Conference, November 23, 1947, Saint Paul, Minnesota. Dr. Rogers is chairman of the Planning Committee, Nebraska State Medical Association.

plete physical examination. Where small fees are paid for physical examinations, the examinations are likely to be worth very little. One agency paying a two-dollar fee requests a history, physical examination, including examination of heart, lungs, abdomen, nose, throat, vision—near and distant, with and without glasses—hearing, blood pressure, various measurements, and urine analysis, with ample space for confidential information which will be held in strict confidence.

Often the recipient, under ordinary circumstances, is the physician's private patient. Here the physician usually renders adequate service, and accepts the reduced fee to avoid embarrassment. Also, often the number of cases treated for an agency are few, and the course of least resistance is to do the work, accept the small fee and not make a fuss.

One question that constantly offers agencies difficulty is that of deciding just what a given medical service implies. For instance, what is a physical examination and what is a fair fee? This, of course, depends on the complexity of the problem which the patient presents, on the ability of the physician to deal with it, and on his desire to do so. Likewise, surgical and other procedures vary much but offer somewhat less of a problem.

This confused state is not alone the fault of the agency; the medical profession has failed to offer constructive leadership. Our medical schools and medical societies have grooved us to a certain pattern. This pattern emphasizes doctor-patient relationship. We must think more about well people and what well people think of us—in particular, what large groups of well people think. It is the well people who make the laws. Our public relations must be improved.

Painful as it is to admit, we *must admit* that a small minority of our profession are dishonest. They strive to get the most and do the least where a third party pays the bill. How to work this third party into the picture is our question. We have not wanted him, but society says he must be there. We must provide leadership and must discipline our own ranks.

With these problems in mind, the 1944 House of Delegates of the Nebraska State Medical Association instructed its planning committee to prepare a "fee schedule" with the hope that it would be uniformly used by agencies paying for medical care from public funds. This was definitely not to become a "fee schedule" for private practice. You would not benefit by a long tabulation of our ups and downs in this effort. However, some steps in the completion of this schedule should be related.

We considered a schedule complete over a year ago, only to find it lacking in some important respects which caused us to discard it, although preliminary printings had been made. We have held numerous deliberations with general practitioners and specialists from various parts of the state. We have been mindful, in particular, where special groups have set up "fee schedules" either on state or national levels. Many schedules from other states, particularly adjoining states, have been reviewed, and an effort toward conformity has been made. Several agencies have already used the schedule in various stages of its development, and its shortcomings have been noted and plausible changes made. It has been through the grind of negotiations with the Veterans Administration. While our state association does not have a completed contract with the Veterans Administration, as far as we know, the schedule has not been an objectionable feature to officers of the administration. Also we should state that the system of numbering, much terminology, and other features are those used by Veterans Administration. Some of our fees are higher and some lower than those of surrounding states. Likewise, our schedule varies somewhat from Veterans Administration schedules as used in other states. These differences for the most part are only slight.

Any schedule which will serve for all the various agencies and various localities cannot be brief or simple. The number of procedures must be large. A system of numbering must be used which will make future necessary alterations possible without disturbing the whole numbering system. For convenience, certain procedures are listed in more than one place. Also for convenience, the first part of our schedule is a rather short list of commonly used procedures, followed by a more lengthy and complete list.

A most difficult problem has been that of fees for specialists. The difficulty is in particular that of *who* is a specialist.

The profession in Nebraska is at this time unwilling to accept wholeheartedly American Board members as the only specialists. The dis-

tribution of certified board members is not sufficiently wide to serve all parts of the state. We must have some answer. While certification is our best answer, a specialist must not be too rigidly defined at this time.

A "fee schedule" should have a feature of flexibility. A schedule could be much more simple if this flexibility were not required. Various conditions exist in different agencies and in medical practices in various parts of the state. Some agencies in certain counties do not have sufficient funds to pay other than limited fees at this time. Federal funds are less limited, and the state, due partly to Federal matching, is also less limited. Also it is not inherent in people to be uniform. Regardless of income brackets, families vary greatly in how they wish to spend their money. Some spend much for home, some for entertainment, and some a relatively large proportion for medical care. Flexibility must be a feature if this schedule is to endure general economic changes. A fair fee for 1932 is not a fair fee for 1947. We have certainly not reached the goal of an honest dollar.

This "fee schedule" provides flexibility by use of a unit system. Every reasonable effort has been made to establish a proper relationship for the various services. This relationship is expressed in a number of units. Without doubt we have made errors in establishing this relationship. Much just criticism could be offered; but only time, experience and co-operation will correct these errors. This matter of relativity is the fundamental foundation of any "fee schedule." Changing trends and methods of practice will indicate futher change. A procedure which is difficult and time consuming today may be made relatively simple in the future, and thus justify a smaller relative value and smaller evaluation in a smaller number of units and thus a lower fee. With the various procedures expressed in units, the whole schedule can easily be adjusted to the various circumstances without disturbing its fundamental relative values. Many will object to the unit system as too complicated and as unnecessary.

However, we must keep in mind that there are three steps to arriving at a just fee. First, what service was rendered; second, what is a fair relative value in relation to other services; and, third, what is the ability to pay in these times. Where only two parties are concerned, the patient and doctor, the matter is relatively simple. Where three parties are involved, the patient, the doctor and an agency, complications are more likely. Much good surely will come if we of the medical profession take constructive leadership in providing a workable system which has both a feature of advantageous uniformity and necessary flexibility. At the present time, it is considered practical to place the value of the unit at 10 cents. The amount of this fee is included in this schedule.

Any doctor or groups of doctors are, of course, free to make agreements with the various agencies; however, we are urging our members to use this "fee schedule" in dealing with public agencies. The value of the unit can be adjusted to any level by the doctor or doctors and the agency. It may be changed by them from time to time, depending on the various factors.

One of the present committees or a new committee of the state medical association should serve as a clearinghouse for this effort. They should receive at state medical headquarters information as to contracts and placing or changing of unit value. They should receive suggestions of all kinds from doctors and agencies. In particular, they should receive suggestions as to changes in the relative value of various services, that is, a change in the number of units credited for the services. The committee should analyze and digest this material. Annually they should report to the House of Delegates. Their report should include suggestions in regard to changes in the unit value for various services.

Then the House of Delegates should have the sole responsibility and authority to change unit values. The planning committee is suggesting changes in our by-laws which will put this into effect.

Another step which would have many advantages would be that of uniformity in the blanks used by the various agencies. There is no reason why a small and a proper assortment of blanks would not fill all needs. Familiarity with a blank on the part of the physician makes for better and more prompt reports. Familiarity with all the present blanks is impossible. Only preliminary steps in this have been made. Also a uniformity of requests for service and methods and time of payment should be part of the plan.

We must be ever mindful that, while we want

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A PLAN FOR ESTABLISHING LOCAL HEALTH COUNCILS

FRED STERNAGEL, M.D.
West Des Moines, Iowa

THE Interprofessional Association of Iowa, composed of physicians, dentists, veterinarians, nurses and pharmacists, was organized thirteen years ago for the purpose of promoting better interprofessional relations. Recently the executive body of this organization felt that, in the light of national developments, we must in some way contribute also to better public relations for our professions. We realized the truth of the statement that in order to encourage better public relations, our organizations must first do good, then tell the world about it. There is no question that our professions are doing good, but most of the people don't know or are badly informed about what we are doing. Last winter the division of health education of the Iowa State Department of Health, which has a full-time traveling director, came to us and solicited our cooperation in a plan for conducting health forums throughout the state. This seemed to be the opportunity we were waiting for, and accordingly we accepted the suggestion to pool our efforts and facilities toward health education, because recent public polls have indicated that the public is more interested in health topics today than in anything else.

All good citizens are interested in the health and welfare of the people in their community. Individually, the layman pays little attention to good health until he loses it, and then he fights to regain what he has either lost or is about to lose. But collectively, every community has a certain group of public-spirited citizens who are continually seeking to improve the conditions for their neighbors, and many organizations have health committees, but these health committees, in most instances, are working in opposite directions. Their efforts need correlation and unified direction.

Last winter the Iowa Interprofessional Association and the Iowa State Department of Health discussed the possible projects and activities that might be adopted for promoting better correlation in health activities, and all in attendance agreed to the facts stated in the preceding paragraph. Health education in a specific, concrete, controlled form was pointed to as one of the needs for the average citizen in Iowa.

There was also a feeling among those present that specific contributions on the part of the membership of the Iowa Interprofessional Association toward a unified plan of health education would bring the professions so represented closer together and would impress upon the public their desire to help in solving health problems from the community point of view as well as from the professional service angle.

After a thorough and complete discussion of the possibilities of uniting the efforts of both the Interprofessional Association and the Iowa State Department of Health in the work of health education, it was agreed that such a plan would accomplish much, particularly since the health department was already set up to do such work and the Interprofessional Association had the talent to supplement such a program.

The purpose was to bring to the citizens of the state, facts that every layman should know, to answer the questions many individuals have regarding health, and to clear up many of the misconceptions that are current among the laity. Through the correlation of our efforts, this service would be possible.

The following steps were taken in the original plan, although occasionally in its execution a readaptation of procedures has to be made to fit the needs of the local community and the area in which the health education forum is to be presented. For your information, however, we present the original idea.

A definite community is selected for a health education forum based upon the interest of the local citizens. The director of public health education of the state health department, who does all the work of promoting and organizing the program, pays a visit to that community and discusses with the local leaders the opportunity for having a health education forum. During this visit those present are informed by the director that the Iowa Interprofessional Association, composed of doctors, dentists, veterinarians, nurses and pharmacists, is co-operating with the Iowa State Department of Health, and both of

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Dr. Sternagel is a member of the Executive Council of the Iowa Interprofessional Association.

these agencies are ready to supply speakers for any community health meetings they may have in mind. For this purpose they are given a list of about fifty subjects to choose from. The committee then selects the topics they desire to have discussed.

This local committee is then given the responsibility of selecting the place for the meeting, supplying ushers, and taking care of all publicity except radio announcements, which are made over the area through the radio program facilities of the state department of health. The committee is encouraged to realize it is up to them to secure a large attendance for both the afternoon and evening sessions.

The program usually is presented in two parts, at 2:30 p.m. and again at 8:15 p.m., three half-hour talks being presented at each session. After each half-hour presentation there is opportunity for questions to be asked by members of the audience. The chairman is instructed about his duty to see that these question periods are conducted properly and that so-called "crackpots" are not permitted to carry the discussion too far from the subject at hand. The sessions usually last about two hours in the afternoon and two hours in the evening. Our afternoon audiences have been much smaller, and experience has proved that it is possible to get more interest, particularly in the questions, during the evening session.

In our experience we have found it better to have just an evening program with three half-hour talks, if the local committee so elects, because the afternoon meetings are, as a rule, poorly attended. Some communities definitely want an afternoon session for the women who cannot come out in the evening, and when this is the case, we try to furnish subjects that will appeal to women.

In some instances high school seniors have shown a desire to attend the afternoon sessions, and for these communities, speakers are chosen who would be most likely to carry an appeal to both high school seniors and adults.

A special point is made of encouraging speakers who take part in the forums to use lay language which can be understood by the entire audience. After the local committee selects the subjects from the list of topics available, the state society of the profession submitting the selected topic is notified by the director and requested to name a speaker, preferably from the area where the forum is to be held. For example, if the topic is rheumatic fever, the state medical society is notified and asked to designate a suitable physician to discuss the disease. The director then contacts the doctor and supplies him with all the details for his appearance, the date and place of the meeting, and such other information as may be necessary for the occasion. Insofar as possible we try to schedule addresses by medical men in the evening so as not to take them away from their practices during the day.

Every effort is made to enlist the co-operation of local lay individuals. The plan is to let them "carry the ball" in this effort to bring health education to the citizens of the community. We do not believe it wise to let the lay individuals feel that the medical society or its allied professions are attempting to impose the program upon the public. If the local group wants to take the lead and will do the proper advertising and lay the proper groundwork, we will furnish the program.

In this respect we have two philosophies: In our original plan, we attempted to get the presidents of every organization in the community to attend, with their secretaries, or send representatives to an over-all planning meeting at some date well ahead of the proposed forum. In some of the communities we have found that this leads to divided responsibility, and unless you can get an enthusiastic "spark plug" in the community, the possibility of "everybody's business being nobody's business" will contribute to a lack of organization and planning or a small audience. For this reason, sometimes it is better to secure a large, enthusiastic, responsible organization in the locality to take the lead. If, for instance, we select an enthusiastic city Parent-Teacher Association Council, made up of a large number of local parent-teacher groups, to sponsor the meeting, it is better than to attempt to secure a number of different organizations for the same purpose. The choice of procedure, however, should be based largely upon what is learned about the community before the anticipated forum is scheduled.

In the State of Iowa, as well as a good many other states, there is a definite movement for the organization of health councils which would abbreviate a lot of the work needed to organize a

forum every year. These health councils should definitely have the support, interest and cooperation of the various organizations that are members of the Interprofessional Association, for they need the guidance of the trained workers in medical and associated professions, without which they cannot accomplish their purpose with any degree of efficiency. Therefore, on the back of each program given out at the health education forums we urge the community to consider the possibility of organizing a health council as the best means of bringing together all the health workers in the community.

If the chairmen of the various committees in the community are brought together to discuss health problems, there is a future possibility that they can very well form the nucleus of a health council. However, it is highly important that representatives of all the organizations in the Interprofessional Association, who live in that area, become a part of the health council and lend their support and interest through personal attendance. This presents a problem within our own organization, which will require a lot of effort on our part to get our members to realize and act on this responsibility in the plan. It would not seem advisable, however, that these men take the complete lead, as this might be misunderstood. But it certainly is highly desirable for them to sit in on the plans and become a part of the community or county health council.

We would like to point out that at each and every one of these forums the director should specifically make the statement that all the organizations in the Interprofessional Association and the state department of health are tremendously interested in community welfare, community health and community betterment; and that these organizations are presenting this health education forum because of their interest in the community. The audience is informed that the local members of the various organizations in the Interprofessional Association are happy to work with the community groups for health improvement through techniques adopted by the health council, and that they are desirous of being called upon to sit in on meetings and given opportunity to be of assistance.

It should be pointed out that there is no expense to the local community for any of the services. The organization and contact work is done by the director of public health education of the Iowa State Department of Health. Expenses of the speakers from the Interprofessional Association are borne by their respective organizations, and, likewise, speakers and the director from the health department are paid for by their own agency.

COMPLEX SIMPLE FRACTURE

To the Editor:—Realizing that the term "simple fracture" as generally defined is thoroughly inadequate to describe the trauma received in many so-called simple fractures, I have added a new definition to the simple and compound fracture nomenclature, i. e., "complex simple fracture" (Key, J. A., and Conwell, H. E.: The Management of Fractures, Dislocations and Sprains, ed. 4, St. Louis, C. V. Mosby Company, 1946, pp. 41-43).

A complex simple fracture is a fracture which is not compound but which has received severe trauma to either or all of the surrounding soft structures, i. e., skin, muscles, blood vessels and nerves. The bony fragments usually are displaced to a marked degree.

"Complex," as defined by "Webster's New International Dictionary," unabridged, is as follows: (1) an assemblage of related things; (2) a whole made up of complicated or interrelated parts.

The complex simple fracture should be further described as to the type of bony injury, for example: complex simple fracture (transverse, comminuted, spiral or oblique, as the case may be).

Through personal contacts and correspondence with the personnel of the three National Fracture Committees (American Medical Association, American College of Surgeons and American Academy of Orthopaedic Surgeons) with reference to their opinions and the necessity for such new fracture term or definition, there was unanimous agreement that such a definition of complex simple fracture was a necessary one and should be generally accepted and used in its broad meaning.

I make an appeal that this new fracture definition or its relative equivalent be used by the members of the medical profession. Besides expressing more adequately the pathologic process in such type fracture it will mean improved records for the hospitals and convey a better description of the fracture to the insurance companies, compensation boards and other related agencies, thereby being of much help to the patient, the physician and every one concerned.

I will appreciate any opinion or suggestions relative to the foregoing.—H. Earle Conwell, M.D., Birmingham, Ala.

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MEDICAL ORGANIZATION AND SOCIAL PROGRESS

WILLIAM D. STOVALL, M.D.

Madison, Wisconsin

IT is unusual for the president of a state medical association, particularly a new president—I became president in October—to suggest or even intimate or insinuate that administrative organizations of the society should be modified. To be asked—indeed, to be invited—to discuss such changes is exceptional. I suspect that there may have been some element of humor at my expense in scheduling me as a streamliner of the organization. However, I might say that I, too, can enjoy the sport of it, and it was more in the spirit of challenging you and of getting your reactions to the opinions of a fledgling that I agreed to talk on this subject. Without this spirit of comradery, I believe I would be frightened at the task which the subject sets for me. So, with somewhat of a sense of humor at my predicament, I have the temerity to make some comments on reorganizational changes for state medical associations.

You will understand that my remarks are predicated upon Wisconsin experience only and therefore may not be at all applicable in other states. And, also, it must be said at the outset that the idea that some helpful change might be devised in the methods by which doctors approach the many and important problems which confront them has been considered for some years past by many of us, and, also, that the suggestions here made are not altogether my own. All that I say is compounded from contributions made by the councilors, the secretary, Dr. Dawson, our president last year, and many others.

From my own observations I should like to point out a few of the things that to me would contribute a better understanding of what the problems of medicine are. It has seemed apparent to me that the committee structure of our association has grown up like Topsy, or possibly I should say like various committees, boards, and commissions that have been added to the various divisions of our government at all levels—county, state, and national. This has occurred as the result of colliding with all sorts and kinds of economic and social problems, creating intraprofessional, interprofessional and nonprofessional differences of opinion and strife. These collisions have usually been sudden, that is, unexpected, and the immediate effect is the organization of another committee to solve a problem that no one knows very much about and which has taken everyone by surprise. After the committee or council, or whatever the designation, has once been created, it stays on forever and continues on the records as an active committee whether or not it is active. And sometimes, it seems to me, they meet and report whether or not they have made any special study or investigation of the subject with which they are concerned. In this way the committee structure piles up year after year until the system becomes an octopus of committees, many of which do not formulate their opinions from expert knowledge.

It is further my opinion that this has occurred because of two things: first, our failure to anticipate what the future may hold for us, and therefore our failure to plan to meet the oncoming situation; second, the preoccupation of physicians with their own affairs, until they are detracted and then distracted by the reverberations of public conflict over affairs in which they suddenly find that they have a vital interest, not only from a professional point of view but from the point of view of a citizen.

A good historical background and acquaintance with current advancing knowledge supply the material for the construction of watchtowers from which future events can be visualized, and form the ingredient with which wise plans to meet these events can be constructed. Much of the discordance, discontent, disturbance, and disagreement in the profession could have been avoided or greatly modified by wise planning from a knowledge of the historical background.

We are not in our present upheaval by accident. Great trends in human affairs grow out of the past like a tree grows out of the soil. The science of disease control and prevention has moved in one direction, from environmental sanitation to the treatment of the individual—even "he that runs may read."

Read at the North Central Medical Conference, November 23, 1947, Saint Paul, Minnesota.

Dr. Stovall is president of the Wisconsin State Medical Association.

All affairs—governmental, private, or voluntary—that are operated by democratic methods are congenitally slow moving and react ponderously to change and have the reputation of being cumbersome and ineffective. I have no doubt that these qualifications prompted the statement, "Free government is better than good government." All of us agree to the sense of this statement, but certainly we cannot agree with all of its implications. Free government is certainly far better than good government if good government means the loss of freedom. However, the implication that free government cannot be good government, we cannot and do not readily agree to. Since our societies are democratic organizations, they do have some of the genetic defects of any such system.

Colliding with complex problems instead of planning to prevent them is, no doubt, one manifestation of the awkwardness of free and democratic institutions. But is it not possible to improve this awkwardness without losing the freedom we want within the organization? Do we admit that free and democratic institutions cannot be improved to meet a changing world? I for one think that improvement can be effected by effort and interest, and that free and democratic organization can be made to operate in a superior and a superlative manner. In my opinion this is essential to the preservation of free institutions and to the preservation of the dignity of the individual.

Preoccupation with professional concerns is a great obstacle for physicians in devising an organization to meet present-day needs. Physicians have enough to absorb their time and attention. It is easily understandable that they shun and shy away from participation in outside activities. Their preoccupation with medicine interferes with obtaining a familiarity with problems of public concern and other matters which so profoundly influence methods by which a complex system is organized, and which determine the problems which such organizations bring to the profession. It is necessary, however, if physicians are going to prevent collision with ideologies that are inimical to good medical practice, that they become informed about the concepts upon which these ideologies are grounded and with the technical practices to which they eventually lead.

In brief, these are some of the considerations which encouraged me to suggest some changes in the medical organization of our state to meet certain economic and social problems resulting from increased medical knowledge. After a review and consideration of some of our immediate problems, it seems to me that they call for only a few very well defined activities, each one, of course, being composed of a great many details which require careful study before their significance can be wisely incorporated into our way of life. These activities might be carried out under the following headings:

1. Medical education and hospitals.
2. Scientific work and postgraduate study.
3. Budget and finance.
4. Public health and governmental activity.
5. Economics, medical service, and public relations.

If one follows the proceedings of the House of Delegates year after year, it will be seen that these five subjects cover quite completely the problems that are brought to that body. And if one has followed these proceedings, it must be apparent that many resolutions come before the House which bear on matters, the historical background and current developments of which have not been given studious consideration. As an illustration we can use medical education. At the present time there are conflicting ideas on what can be done to encourage young physicians to choose the general practice of medicine instead of some special field of practice. A committee of the state medical association should be appointed to study this problem and bring back to the councils of the society definite recommendations, after careful study of the historical development of medical education in this country and the factors which are influencing present trends. It has been said that the tide cannot be swept back; this we believe, but if we are prepared we can ride the tide out and enjoy the ride. There isn't time for me to carry these illustrations further. There isn't time for me to discuss each one of the items that I have suggested as suitable for committee or council work, but I would like to say what we have done in Wisconsin.

At the last meeting of the House of Delegates I asked for authority to appoint a committee to study the committee structure of our state medical association, and to report back to the House of Delegates the results of their findings. I feel that we need a very strong and active committee structure, because I have seen how excellently

the various councils of the American Medical Association work and because the Council on Scientific Work of our own medical association has so successfully handled the scientific affairs of our society. I have been encouraged to believe that, in our organization, five councils of fifteen members each, each member to serve a period of five years, with a chairman to be appointed by the incoming president, would provide a mechanism for definite study and deliberation on these problems, whereby knowledge and advice would form a basis for critical action by the House of Delegates. This does not mean that the incoming president would change the chairmanship, but he could. The chairmen of these five councils would act as a cabinet for the president. It might be said that the committees are too large. The thought is that each council may divide itself up into subcommittees, assigning various problems to small groups. This seems advisable because each member of a committee cannot, in the time at his disposal, familiarize himself well enough with all the subjects which would come before the council to provide an expert opinion.

By a division into smaller groups it is possible, however, for the individual groups to become well versed in restricted fields of knowledge. Since it has become popular to be critical of continuous service over a long period of time, it may be said that the period of service of each committee member is too long and that the restriction of the number of councils or committees reduces active participation in medical society affairs to a small group. The size of these committees precludes that, and the appointment of new members each year to take the place of those whose terms expire would be drawing new personnel into the committees. They would pass out into the ranks of the membership to become leaders. This process in a few years should build a strong society of critically and constructively thoughtful members.

I am so convinced that the maintenance of a free government depends upon a strong local leadership that I think one of the chief functions of a state medical association is to develop leadership among its members. This can be done only by giving them responsibility and allowing them to become informed in certain subjects. In this way alone will the profession be able to influence public opinion, after careful deliberation on well-considered subject matter rather than by whim or fancy. Curti, in his book, *The Growth of American Thought,* refers to Beard's plea that those concerned with human affairs distinguish between what is known and can be proved and that which is longed for and loved. We in the medical societies must also realize this, and have opinions of our own that are based upon the facts as they are, or at least the facts as we can obtain them, and boldly deny the flattery of the uninformed and those who thus plan the failure of plans of people living under a government of free people. In this way we can maintain free institutions and free people, and have good medical practice and good government as well.

EXAMINATION FOR REGULAR CORPS, USPHS

A competitive examination for appointment in the Regular Corps of the United States Public Health Service in the grade of assistant surgeon (first lieutenant) and senior assistant surgeon (captain) will be held in October. The written examination will be conducted October 4, 5, and 6 at places convenient to the candidates. The oral examination will be held at various points throughout the country.

All applicants must be at least twenty-one years of age and citizens of the United States, must present a diploma of graduation from a recognized medical school and satisfactorily pass a physical examination performed by Public Health Service officers.

Physicians beginning internship on July 1, 1948, will be admitted to the examination. Successful candidates will be placed on active duty in the Regular Corps upon completion of internship on July 1, 1949.

Applicants for the grade of assistant surgeon must have had at least seven years of educational and professional training or experience, exclusive of high school. Applicants for the grade of senior assistant surgeon must have had at least ten years of educational and professional training or experience, exclusive of high school.

Entrance pay for an assistant surgeon with dependents is $5,011 a year and for senior assistant surgeon with dependents $5,551 a year. This includes the additional pay of $1,200 for medical officers, as well as subsistence and rental allowance. Provisions are made for promotions at regular intervals up to and including the grade of senior surgeon (lieutenant colonel) and for selection for promotion to grade of medical director (colonel) at $9,751 a year. Retirement is authorized at either completion of thirty years' service or at the age of sixty-four. Full medical care including disability retirement at three-fourths pay is provided.

Application forms may be obtained from Public Health Service Hospitals, District Offices, or by writing to the Surgeon General, United States Public Health Service, Washington 25, D. C.

A REVIEW OF THE EPIDEMIOLOGY OF SCARLET FEVER

ALEX G. BERGER, M.D.

Acting Director, Acute Communicable Disease Control
Health Department
Minneapolis, Minnesota

IN 1924, when the Dicks reported their experimental production of scarlet fever by swabbing the throats of several human volunteers with a strain of hemolytic streptococcus isolated from a previous case of this disease, the scientific world had in general accepted such experimental findings as conclusive proof of the specific etiology of scarlet fever. However, since that time, new laboratory methods of differentiation between the various hemolytic streptococci have led to the discovery of so many significant additions to the epidemiology of scarlet fever that an entirely new concept of this disease has resulted. The writer therefore feels that a brief review of such developments, presented in the order of their occurrence, may provide a more unified and complete concept of scarlet fever as it is understood today, and be of help in clarifying the new epidemiological approach deemed necessary for its control.

Although fairly accurate descriptions of scarlet fever appear in the literature as early as the middle of the sixteenth century, it was Sydenham who first employed the term "scarlet fever," and carefully described the disease as it appeared in London from 1661-1675.[6] Thereafter, scarlet fever became more and more clearly defined as a clinical entity. However, it was frequently confused with diseases such as diphtheria, measles, and various other rash-producing infections. Such difficulty in its diagnosis lent emphasis to the desirability of a laboratory aid for its differentiation, and therefore served as an added stimulus in the search for its etiology. Still, for a long time, attempts at identification of such causative organism proved difficult and baffling.

Early ideas relative to the etiology of scarlet fever included protozoan, bacterial, and virus concepts. It was Mallory in 1904 and Dohle in 1912 who made the suggestion that scarlet fever was due to a protozoan infection, inasmuch as inclusion bodies were frequently found in the tissue cells of scarlet fever patients. However, similiar inclusion bodies were later found in other infections, so this idea was soon discarded.[6]

The possibility of a streptococcus as the etiological agent of scarlet fever was suggested as early as 1885 by Crook, who reported the presence of streptococci in the blood and organs of individuals dying of this disease. About this time also, Klein had succeeded in isolating a streptococcus from the tissues of scarlet fever patients and named it Streptococcus scarlatina. In 1900, Boginsky and Sommerfeld reported the constant finding of streptococci in the throats during the characteristic angina of seven hundred individuals suffering from scarlet fever. Streptococci were also frequently noted accompanying the various septic complications occurring in this disease.[6]

"Such association of the hemolytic streptococcus with scarlet fever led some investigators to propose the view that the streptococcus is the etiological agent of scarlet fever."[6] Others, however, considered such possibility as quite unlikely inasmuch as the reactions to these infections were quite dissimilar. One attack of scarlet fever seemed to confer life-long immunity, yet streptococcal infections could recur in the same individual time and time again. They therefore felt that the causative organism of scarlet fever was probably a virus, and that the streptococcus plays the role of secondary invader.

Such differences in streptococcal reaction might have been more easily understood if the heterogeneity and complexity of the streptococcal group had been more fully appreciated at that time. Though differences in the behavior of these organisms had been noted from time to time, it was not until 1918 that laboratory proof of the existence of different streptococcal strains was made available. At this time, by means of agglutination and protection tests, Dochez, Avery, and Lancefield clearly demonstrated the existence of at least four different serological types.[7]

Thus far, therefore, evidence had been advanced to show that not only were hemolytic streptococci closely associated with scarlet fever and its complications, but they were also heterogeneous in character and consisted of separate and distinctly different strains. Such evidence could easily account for both the different types of infection produced and the variability in immunity

formation. Scarlet fever, it was suggested, could very well be just one of the various streptococcal infections caused by a specific strain of hemolytic streptococcus. To definitely prove such a possibility, it was necessary to reproduce the disease through the experimental inoculation of such organism into another animal, preferably a human being.

Probably one of the earliest attempts at such a procedure consisted of the experimental production of scarlet fever in swine by Class in 1899, through the inoculation of a coccus-like organism. This organism may well have been a hemolytic streptococcus for it had been isolated by him from 300 cases of human scarlet fever.[6]

Later, in 1914, Krumwiede, Nicoll, and Pratt reported the scarlet fever infection of a laboratory worker which followed her accidental swallowing of living streptococci, containing streptococcus scarlatina. Efforts at this time to infect monkeys with the same streptococcus were unsuccessful.[6]

Still later, in the year 1921, attempts were made by Dick and Dick to reproduce scarlet fever by the experimental inoculation of human volunteers. Their efforts were unsuccessful at this time. However, in 1923, Dick and Dick, using hemolytic streptococci cultured from the infected finger of a nurse suffering from scarlet fever, successfully reproduced scarlet fever in a human volunteer by swabbing these organisms on the pharynx and tonsils. Furthermore, to assure themselves that the causative organism was the streptococcus and not a virus associated with such streptococcus, they cultured this organism in bottles of sheeps blood agar, and passed the condensation fluid through a Berkefeld V. filter. Inoculation of the filtrate did not produce scarlet fever, yet later inoculations of the unfiltered culture in the same individuals occasioned another case of scarlet fever. Such experimental evidence, the Dicks believed, satisfied all of Koch's postulates, and therefore definitely established the etiology of scarlet fever.[4]

In addition to the findings relative to its etiology, other important features of scarlet fever had been concurrently noted by various investigators. For a long time, students of scarlet fever had been impressed with the similarity of this disease to diphtheria. Thus, Berge in 1895, suggested that just as in diphtheria, so also in scarlet fever, the symptoms were due to the absorption of soluble toxins. In 1907, Gabrichewsky attributed the scarlatiniform reactions, which occured during his attempts at scarlet fever immunization, to a toxin present in the vaccine. Later, in 1918, Schultz and Charlton revealed the presence of scarlet fever antitoxin in the serum of normal adults when they demonstrated the blanching or neutralizing effect that such serum had on the rash of scarlet fever. They found the serum of about 60 per cent of normal adults to possess this blanching reaction. In 1923, Mair pointed out the significant fact that the blanching power of the serum of a child was negative if tested before an attack of scarlet fever, but became positive after such infection. Furthermore, on comparing groups of adults and children who had not had scarlet fever, he found that the sera of the adults possessed this blanching power much more often than did the sera of the children.[6] Such a finding indicated that adults may develop scarlet fever antitoxin through subclinical exposures to the organism without necessarily developing the disease. Finally in 1924, the Dicks made practical application of the above findings, and introduced the now very well known Dick test. They found that by injecting, intracutaneously, small amounts of a filtrate containing scarlet fever toxin, they were able to detect the presence or absence of scarlet fever antitoxin. Children who gave no history of scarlet fever, i.e., who possessed no antitoxin, reacted in a positive way to such infection by developing an erythematous area at the point of injection. The same test when performed on children after they had recovered from an attack of scarlet fever produced no erythematous area, i.e., gave a negative reaction. Thus a test had been provided whereby susceptibility to the scarlet fever toxin, and presumably to scarlet fever infection, could be ascertained.[5]

At this stage, therefore, it seemed that the epidemiology of scarlet fever had been practically completed. The long confused and controversial concept as to its etiology had apparently been definitely clarified. A test had been devised whereby evidence of susceptibility as well as immunity to scarlet fever infection could now be ascertained. The value of scarlet fever antitoxin and convalescent serum had already been demonstrated. By this time also, the Dicks had suggested the inoculation of graduated increasing doses of scarlet fever toxin as a method for the active immunization of susceptible individuals. Truly then, it appeared that the mysteries of scarlet fever had

been cleared, and the means for its eradication had been provided.

Careful observations, however, by students of this disease, soon revealed various discrepancies and perplexities which could not be adequately explained by the epidemiology of scarlet fever thus far elaborated. It did not explain why individuals who were Dick-negative would, after exposure to a scarlet fever case, not infrequently exhibit symptoms similar to scarlet fever in practically every detail, except that no rash would appear. Such reactions appeared to occur most often in the adult contacts of a definite scarlet fever case. Occasionally however, the reverse would occur, and the first indication of an infection in the family would be a sore throat in one of the adults, following which one or more of the children would come down with typical scarlet fever.

Confusion also presented itself in the consideration of milk-borne epidemics of sore throat. Since 1900, epidemics of septic sore throat had been considered by the majority of physicians as comprising a clinical entity. Davis, in 1929, reiterated his claim that the streptococcus isolated by him in 1912, from a milk-borne epidemic of sore throat, was a distinct species. This organism, which he called *Streptococcus epidemicus,* he believed was the sole cause of this disease. On the other hand, Smillie had observed in 1917 that in many septic sore throat epidemics, scarlet fever cases also occurred, and that both types of cases might be traced either to cases of scarlet fever or to septic sore throat. Outbreaks of septic sore throat, therefore, had, from time to time, been reported as giving a varying clinical picture; and scarlet fever, as well as erysipelas and other septic conditions, had been observed in the same epidemic.[13]

Further perplexities in the understanding of scarlet fever, which could not be explained at this time, arose from the fact that the clinical picture of this disease seemed to vary considerably on different occasions. Typically, the clinical picture of scarlet fever, consisting of a sore throat, high fever, nausea, vomiting, and a fine punctate rash, which was later followed by desquamation, was unmistakable and easily diagnosed. However, every now and then, cases would occur so mild and atypical in character that diagnosis at times would be almost impossible. Such cases might display only a very mild fever, little or no sore throat, and an almost negligible rash which might last only for hours instead of the usual three to seven days.

Clarification of such problems and confusing situations, was made possible only by the development of more specific laboratory methods for the differentiation and detailed classification of the hemolytic streptococci.

Though attempts at streptococcal classification had been made by a variable number of bacteriologists, the methods as suggested by Lancefield and Griffith seem to have been found most reliable, and have therefore been most widely accepted. It had long been known that the hemolytic streptococcus did not confine itself to the invasion of man alone. Attempts, however, to differentiate the streptococci, in accordance with their sources and their variable pathogenicity, had not heretofore been too successful. Fairly adequate methods for distinguishing the human from the nonhuman streptococcal pathogens had been attained by the use of various biochemical and cultural reactions. Such methods were, however, neither complete nor as specific as might be desired. It was not until 1933 that a new and specific method for such differentiation was made possible. At that time, Lancefield came forth with a precipitin reaction by which she was able to divide the hemolytic streptococci into several distinct groups.

"The precipitin test," she stated, " is dependent on the presence in streptococci of substances characteristic of the large groups, although not specific for the types within the groups."[15] By precipitating or extracting such substances from the bacterial cell, she was better able to reveal the serological differences that existed between the various groups of streptococci. Thus, hemolytic streptococci of human origin were found to contain a carbohydrate called "C" substance, which is not type specific and yet is not found in strains from sources other than man. Further experimentation revealed that similar carbohydrate substances were also to be found in the other streptococcal groups. These substances, although chemically related to the "C" substance of the human group, were serologically different and therefore specific only for its own particular group. On the basis of such serological differentiation, the hemolytic streptococci were at first divided into five groups, and at present are divided into at least nine different groups. They are listed as A, B, C, D, E, F, G, H, and K.

Group A was found to comprise strains chiefly of human origin, and with few exceptions, contained all of the human pathogenic strains.[15]

Attention has therefore been centered primarily on this group, and methods for its further division into its component strains or types have been carefully studied. Here again, Lancefield pioneered, for in 1919, together with Dochez and Avery, she had initiated the first systemic classification of hemolytic streptococci of human origin.[7] Later, in 1928, she demonstrated the presence of a type-specific substance of protein character in the hemolytic streptococcus which she called "M" substance, and by a precipitin technique separated a number of immunologically distinct types.[16] About this time also, another improved method for the differentiation of the human streptococcal pathogens was developed by Griffith. This method consisted of slide agglutinations of the various hemolytic streptococcal pathogens with absorbed antisera, i.e., before agglutination with the unknown organism is attempted, each antiserum used is absorbed with a suspension of organisms made up from all of the heterologous types. By such method, Griffith was able at that time to distinguish more than twenty serological types of hemolytic streptococci.[12] At present, with the aid of both the Lancefield and Griffith methods, the hemolytic streptococci of group A have been divided into at least forty different types, numbered as types 1, 2, 3, 4, et cetra.

Introduction of such improved laboratory methods to the scientific world led to new attempts at the isolation and specific identification of the organisms present in the various streptococcal infections. Consequently, a vast amount of new facts has been gathered—facts so radically different from previous impressions that an entirely new concept of scarlet fever and its associated streptococcal infections has resulted.

Cultures of scarlet fever patients, when examined by these new methods, uncovered data that definitely proved the belief of the Dicks and others, relative to the specific etiology of scarlet fever, to be erroneous. Thus, as early as 1927, Griffith, on identifying the organisms of 60 per cent of the scarlet fever cases occurring in Great Britain, was able to show that at least four different types were involved.[9] Reports from investigators in other countries soon revealed that still other types were to be found in this disease. In fact, Schwentker has recently noted that all known types of group A have at one time or another been recovered from Scarlet Fever cases.[22] Generally, however, it was found that during epidemics, only a few streptococcal types tend to predominate, but that these types differ from place to place and from season to season.[9]

Likewise, investigators now dispelled the belief that other hemolytic streptococcal infections, such as septic sore throat, erysipelas, or puerperal sepsis, were specific in their etiology. It was now found that the same organism which would cause scarlet fever in some individuals might produce a septic sore throat in others, while still in others it might occasion erysipelas or puerperal infection. Careful studies indicated that just what happened when hemolytic streptococci attacked an individual was determined by at least three factors: (1) the resistance of the host, (2) the site of the implantation, (3) and the characteristic properties of that particular hemolytic streptococcus. An analysis of each of these factors should therefore be considered at this time, if their manner of operation and resultant effect are to be clearly understood.

A study of the hemolytic streptococci has shown that their pathogenicity is dependent not only upon their ability to produce erythrogenic toxin but also upon their ability to invade tissues. A detailed study of the invasive properties of these organisms indicate that such abilities are occasioned by the capacity of the streptococci to synthesize and elaborate a number of substances that react with human tissues. Some of these substances and their effects have been identified. They include two streptolysins which lyse human erythrocytes (one of these is oxygen labile, while the other is oxygen stable): fibrinolysin which dissolves human fibrin; and hyaluronic acid, a component of the capsule of the bacterial cell, which facilitates the spreading of the streptococcus throughout the tissues.[2]

The pathogenic properties of the hemolytic streptococci have been found to vary considerably, both in quality and quantity. Thus, while some organisms might be especially invasive in character, such organisms might have little or no ability to produce erythrogenic toxins. On the other hand, the reverse might also be true, and organisms which have high toxin-producing ability might possess invasive qualities of little or no consequence. All possible combinations of the above properties were found to exist, and as such, tended to determine the type of streptococcal

infection occasioned. Thus, Evans in a recent review noted that types 3, 8, and 10 appear to be high in their toxin-producing qualities, for they were almost constantly associated with scarlet fever but rarely with any other streptococcus infections. On the other hand, types 5, 13, 14, and 18 appear to have low toxin-producing ability but high invasive qualities, for they were rarely associated with a rash, yet commonly produced suppurative and other miscellaneous streptococcal diseases. Types 6 and 19 were found to be associated with suppurative diseases on some occasions and with scarlet fever infections at other times. Such a combination of effects could, therefore, indicate that they possess both toxin-producing action and a high invasive ability.[8]

The type of infection produced, however, is dependent not only on the invading pathogen but also upon the resistance of the host involved. The Dicks had previously noted that individuals who were susceptible to the erythrogenic toxins, i.e., Dick-positive, reacted to the hemolytic streptococcus by developing typical scarlet fever, while others who had become Dick-negative would not develop the disease. More recent studies, however, demonstrated the fact that, though immune to the rash-producing toxin, such individuals may still be subjected to all the signs and symptoms occasioned by the invasive features of such organism. A Dick-negative individual might therefore display the symptoms of a septic sore throat if the invading organism attacked the nose and throat; erysipelas if such organism invaded the skin; or puerperal sepsis if the uterine tissues were attacked.

Consideration of scarlet fever, in the light of such new experimental data, has therefore resulted in an entirely new understanding of the disease. What had long been considered a specific infectious disease now appeared to be a disease syndrome caused by any one of a wide variety of hemolytic streptococci.[9] Such syndrome, it was found, represented the composite effect of two components, namely, an infective or invasive component and a toxic component. The infective component is responsible for all signs and symptoms resulting from the invasion of tissue. These symptoms are similar in all streptococcal infections, whether such infection be scarlet fever, erysipelas, puerperal fever, or simple angina. It is this component that is the cause of any extension of the infection to adjoining structures, and is therefore the element responsible for most of the complications occurring in scarlet fever. The toxic component, on the other hand, is related chiefly to the systemic effects, and is therefore responsible for the exanthem and enanthem, and for the reactions of vomiting, arthralgia, and albuminuria.

When scarlet fever is produced, its clinical form will depend largely on the relative proportion of the toxin-producing and invasive qualities present in the causative organism. Thus, as emphasized by Gordon, one clinical type may exist in which the manifestations are essentially toxic, still another in which the invasive qualities predominate, while a third may represent a mixture of the above two elements. The mixed form is the type usually responsible for the manifestations of typical scarlet fever, and is variously designated as light, moderate, or moderately severe. "Aside from this group of readily recognized reactions, there is a group of atypical infections of varying extent, mild in nature, and difficult to diagnose. They represent essentially low-grade invasive reactions, with the toxic element indefinite and sometimes so slight that the eruption of the skin is most fleeting."[9]

In addition to the above clinical manifestations of scarlet fever, Gordon has drawn attention to still another form of infection which is latent or subclinical. Here, "The toxic element is absent, and the invasive factor so slightly active that it leads to no clinically recognizable sign. There is clear cut evidence of the existence of this group, but little appreciation of the number of cases involved in proportion to the other two."[9]

Control

Although the present incidence of scarlet fever appears to be as great as ever, the general level of severity in this infection seems to have progressively decreased. Pope, in a review of the experience of Providence, Rhode Island, for the years 1865-1924, reports that whereas in 1886 there was one death in every five cases of scarlet fever, there was only one death in every 114 cases in 1923.[9] Woods, in 1933, showed that a similar change had occurred in England and Wales. Examination of scarlet fever fatality rates in Minnesota likewise reveals a progressive drop from a high of 6.9 per cent in 1910, to a low of .2 per cent in 1946. In most parts of the world, therefore, scarlet fever is today a mild disease,

with deaths less than 4 per cent of what they were eighty years ago.

Has scarlet fever, then, at last been subdued? Can it be that the general betterment of our health conditions, and the better medical care now available, have together been instrumental in permanently changing a fearful and highly fatal disease into a relatively mild and innocuous ailment? Possibly. Yet it is well to note that throughout the generations, scarlet fever has frequently exhibited extreme variations in its severity. Thus in the middle of the seventeenth century, Sydenham described scarlet fever as extremely mild. Toward the end of the eighteenth century, scarlet fever was again severe. Immediately after this period, the severity diminished, and from 1804 to 1816, it is again alluded to as a mild disease. However, after 1830, the disease is noted by Creighton as "the leading cause of death among the infectious diseases of childhood." Such severity apparently remained until the middle of the nineteenth century, when the present progressively downward trend began.[9]

It would be difficult to foretell just how long scarlet fever will remain a mild disease. Even during this generally mild period, scarlet fever, as well as all other streptococcal infections, has on certain occasions temporarily reverted to a form exhibiting a marked increase in severity. Coburn has shown that, both in World War I and II, a combination of factors such as a large number of susceptible recruits, a general disturbance in the living conditions of the host, and the spread of virus infections, would occasion a sudden increase in the pathogenicity of the streptococcus and thus produce intense cases of scarlet fever and other streptococcal infections.[2] It would be much wiser, therefore, to guard against the consequences of any future change in scarlet fever severity by promoting and establishing more adequate methods for its prevention and control.

The control of scarlet fever does not lie in measures directed only at the typical scarlet fever case, for, as has been shown, this group constitutes only a small fraction of all the various clinical forms of this disease. Adequate control measures should encompass all forms of scarlet fever infection and should therefore include the atypical case, the subclinical case, and even the normal carrier of the scarlet fever organism. Moreover, since all types of hemolytic streptococci have, at one time or another, produced scarlet fever,[22] and since these same streptococci may have at one time, occasioned scarlet fever and at another time produced erysipelas, streptococcal sore throat, or any other streptococcal infection, a program of prevention and control should deal with this whole group of streptococcal infections and not simply with those which show a rash.

Measures for the control of streptococcal infection must concern themselves with the factors that determine the communicability of a disease. Such factors include a reservoir of infection, a means of transmission, and a group of susceptible individuals. Eradication of even one of these elements could break the chain of communication, and thus eventually eliminate such infection. Such a procedure, however, is rarely possible. More feasible, therefore, would be a setting up of measures for the limitation and modification of these factors. If successful, such a procedure could result in a significant reduction in the incidence and severity of streptococcal disease.

Reservoir

Although the hemolytic streptococcus is capable of producing a great variety of diseases in man, scarlet fever seems to be the only one of such infections where control measures have been attempted. For generations it has been recognized that scarlet fever is a contagious disease, that its reservoir is man himself, and that its mode of transmission is primarily through human contacts. Accordingly, rigid measures were set up for the isolation of the patient and the quarantine of his immediate contacts. Such measures have usually created much inconvenience and economic distress. Consequently, many infractions of the quarantine regulations have resulted, and not infrequently attempts have been made to avoid the reporting of such cases to the health authorities. Gordon has recently estimated that less than 70 per cent of the recognizable cases of scarlet fever are registered with the health authorities.[10]

In addition to this number of unreported typical cases, we find that there are many atypical scarlet fever cases, streptococcal carriers, and numerous hemolytic streptococcal infections other than scarlet fever, that rarely, if ever, are subjected to any control measures. We can thus appreciate how small a fraction of the total load of streptococcal infections is really affected by our present health regulations.

If our measures for control are to be at all adequate, health regulations must be changed to include all streptococcal infections. Such a change necessitates the close co-operation of physician and patient with the official health agencies. This means a prompt and complete reporting of cases and suspects by the physician, and a conscientious observance of the prescribed regulations by the patient. Such co-operation can usually be attained only if the inconvenience to the patient is reduced to a minimum.

Recognizing these facts, public health authorities are making attempts to liberalize their regulations and are recommending radical changes in the period of isolation for scarlet fever cases and in the quarantine restrictions for their contacts. Thus, in 1945, the American Public Health Association in their booklet, *The Control of Communicable Disease,* came out with the suggestion that scarlet fever be considered in the same category as all other hemolytic streptococcal infections due to Lancefield's group A, and that the isolation period of this whole group of streptococcal infections be limited to fourteen days in uncomplicated cases. They further suggested that the quarantine of contacts is not indicated and that the placarding of the home may be omitted.[1] New York City has gone even further, and since 1945 has reduced its isolation period for all uncomplicated hemolytic streptococcal infections, including scarlet fever, to "not less than seven days." They also do not restrict their contacts, and allow children contacts to attend school during the isolation period of the patient.[18]

Changes such as these are not without criticism. It is not uncommon for a physician to be called upon to treat children with scarlet fever who are apparently infectious much longer than seven days, some even as long as four weeks. Some physicians, therefore, feel that a radical reduction in the period of isolation might be the source of an increase rather than a decrease in secondary infections. Thus far, however, New York City has not found this to be true, for the number of cases of scarlet fever reported previous to the setting up of this new regulation compares very closely with the number of cases reported in the past two years.[18] It is well also to note that this marked reduction in isolation period refers only to simple cases, i.e., without complications. If complications are present, such regulations require the continuation of isolation until such complication either has disappeared or has been definitely proven to be noncommunicable. This is in accordance with Gordon's observation in 1932, when he definitely showed that it is the complicated case rather than the simple which is primarily productive of secondary cases.[11] The simple cases usually lose their infectivity fairly rapidly. This is especially true since the introduction of "sulfa" and penicillin therapy, for a more complete eradication of streptococci from the nose and throat is now possible in a much shorter interval. Residents of the Minneapolis General Hospital have frequently been able to obtain negative nose and throat cultures as early as twenty-four hours after the onset of penicillin therapy. Spink et al suggest a five- to seven-day course of penicillin therapy for a more permanent eradication of streptococci.[24] We can, therefore, feel assured that, if modern therapy is administered, a seven-day isolation period could prove adequate for the control of the simple cases. The occasional secondary case that might result from a too early release of a scarlet fever patient would be amply compensated by the greater range or extent of control of all the hemolytic streptococcal infections that would be possible under a more liberal form of regulation.

The atypical nature of many of our hemolytic streptococcal infections makes it desirable to have available some laboratory measures which could aid the physician in his diagnosis. The identification of the specific group and type of hemolytic streptococcus concerned in each infection requires too much time to be of value in furthering early diagnosis, and is too complicated a procedure to be practiced on a large scale. Less difficult, however, is the bacteriological examination for hemolytic streptococci as a whole. This procedure can be performed quickly and easily, and is therefore a service that can be provided by most public health laboratories. It should be emphasized, however, that the diagnosis of hemolytic streptococcal infection should not be determined primarily by the laboratory culture. Less than 50 per cent of the initial cultures taken by the health department nurses from definitely diagnosed scarlet fever cases proved to be positive for the hemolytic streptococcus. Though a higher percentage of positives has usually been obtained from hospitalized patients, it is important to note that the finding of the hemolytic streptococcus in cultures is primarily of help in the formation of a

positive diagnosis, but that a negative culture does not necessarily imply the absence of such infection. Furthermore, if cultures are to be of aid in the detection of suspect cases or carriers, they should be taken from the nose as well as the throat. Hamburger has recently shown that hospital cross infections, infections in barracks, and food-borne epidemics of streptococcal pharyngitis or tonsillitis have frequently been traced to carriers with positive nose cultures who exhibit high "streptococcal outputs." He therefore feels that carriers of B hemolytic streptococci whose nose cultures are positive constitute a more dangerous group than those in whom the streptococci remain confined to the throat.[14]

Transmission

The transmission of streptococcal infections has generally been conceded to be primarily due to droplets spread in person-to-person contacts. Though epidemics have also been traced to food and milk contamination by streptococcal cases or carriers, the exclusion of infected persons from the handling of food or milk products and the pasteurization of milk supplies have practically eliminated this mode of transmission. The respiratory spread of streptococcal infections continues to be a major threat to our well-being. The prompt isolation and modern treatment of all known streptococcal diseases, however, may prove of definite value in limiting the spread of such infections. Still, Schwentker does not feel too optimistic over the possible benefit that can be derived from isolation of known cases, for he points out that for every known case there are a dozen unknown carriers. The attempt to recognize and segregate such carriers, he believes, is impractical; for, he says, "practically every person becomes a carrier of streptococci for at least a few days."[23] Nevertheless, the prompt treatment and isolation of all suspect and definite streptococcal cases could remove the source of most of these contaminations and thus minimize the possible number of secondary cases.

Although the direct method of spread by person to person contacts seems to be the primary mode of transmission of streptococcal infections, the indirect method cannot be entirely discounted. Of late, much interest has been redirected towards the potentialities of disease transmission through the inhalation of infected droplets. Such droplets, Wells has shown, can frequently remain suspended in the air for many hours; yet, until recently, the number of such floating organisms was believed to be too small to actually infect the average individual. Robertson, Hamburger et al, however, have recently shown that though the bacterial population of a room may be low at times when the air is undisturbed, i.e., at night, it can increase tremendously during such periods of disturbance as may occur during the peak of morning activities. This increase in bacterial content is usually occasioned during the process of bed making, sweeping, et cetera, when all those organisms which had previously been deposited on the bed clothes, floor, and pajamas, are again redispersed into the air. On culturing samples of air in the various wards, they found that the organisms which seemed to predominate in the air were identical with the types of hemolytic streptococci which were causing most of the secondary or cross infections prevalent in those wards.

Further study also revealed that it was the individual with positive nose cultures who usually expelled the largest number of organisms into the air, for, not infrequently, it was found that the presence of even one nasal carrier in a ward would produce a heavier contamination of the air and cause more cross infections than would be occasioned by large numbers of individuals harboring the streptococcus in their throats alone.[20]

Such findings could well explain why some individuals with scarlet fever, on being hospitalized, would later be affected by complications due to an entirely different type of hemolytic streptococcus than the one found upon admission. Such findings now revealed why a scarlet fever patient who would develop rhinitis or sinusitis was more likely to cause secondary cases than one who was free of such complications. Such observations are also suggestive of the mechanism by which epidemics may occasionally sweep through an institution even though the finest type of contagious technique seemed to be observed.

Recognition of the airborne route as a potential mode of spread of respiratory and wound infections has led to various suggestions for its control. Such suggestions include both methods for the prevention of the dispersal of organisms into the air, as well as measures for the disinfection of the air. Numerous experiments testing the effectiveness of such measures have been instituted, and

though conclusive evidence is not yet at hand, suggestive data has already been accumulated. Thus, Robertson et al have shown that by oiling the floors of various barracks, they were able to reduce the number of airborne bacteria by approximately 70 per cent; while if, in addition, the bedding was also oiled, a further reduction of about 90 per cent of the bacterial counts was obtained. How effective this radical reduction in airborne bacteria could be for the prevention of respiratory infections due to streptococci has not yet been fully determined. Robertson claims, however, that the results obtained thus far in his experiments point to a significant reduction in the number of hospital admissions for acute respiratory diseases from barracks in which the bedding and floors were oiled.[20]

Further control of air contamination has also been attempted through air disinfection. For this purpose, ultraviolet radiation and the use of certain glycol vapors have been most commonly employed.

Studies made by Wells in Philadelphia suggest that ultraviolet irradiation of class rooms can be of material aid in minimizing the spread of respiratory diseases.[26] Recent attempts, however, by Perkins to confirm such findings were unsuccessful.[19] A detailed study of this problem was also made by Wheeler. Evaluation of his results reveals a definite reduction in catarrhal infections, but fails to demonstrate any significant reduction in streptococcal infections following the use of ultraviolet irradiation.[27] Various attempts have also been made to evaluate the effects of glycol vapors for the prevention of cross infections. Most of these studies have been made by various members of the Commission on Airborne Infections.[17] Results obtained thus far have been far from conclusive. Much more work seems necessary, therefore, before any definite opinion can be formed concerning the effectiveness of the above methods of air disinfection.

Susceptibility

Although streptococcal infections are exceedingly mild and of rare occurrence in tropical areas, they increase greatly in incidence and severity in northern latitudes. Variations in the occurrence and severity of this disease are even noted in the northern areas, for the number of such infections start increasing in fall, reach their peak in late winter, and then steadily decline until the summer season, at which time the disease becomes markedly reduced both in incidence and severity. Whether such variations in reaction are due to a fluctuation in the resistance of the host or rather to changes in the virulence of the invading pathogen is unknown at this time. Valuable use, nevertheless, could be made of such observations. Such observations can be instrumental in directing the transfer of patients with rheumatic fever to regions which have a low incidence of streptococcal disease, and thus through the prevention of recurrent streptococcal infections minimize the number of heart complications. The decrease in virulence of streptococcal infections in summer could also warrant a shortened isolation period for the occasional case occurring in that season.

The limitation of streptococcal infections and the prevention of recurrent attacks of rheumatic fever have also been attempted through the administration of prophylactic doses of the "sulpha" drugs. Thomas, in reporting the results of a four-year study in which 1 gram of sulfanilamide had been administered daily to a group of adolescents and young adults, noted that none of those individuals getting sulfa suffered from any acute B hemolytic streptococcal infection or from any attacks of rheumatic fever, whereas both streptococcal infections and at least five rheumatic fever episodes were observed in the control group. The United States Navy likewise reported that the prophylactic administration of 1 gram of sulfadiazine to part of the personnel in several training centers for a period of four months resulted in the reduction of 80 to 90 per cent of those respiratory diseases requiring hospitalization, as well as a reduction of about 85 per cent of all streptococcal infections. As a consequence of the minimizing of streptococcal infections, they report that the incidence of rheumatic fever in such cases dropped sharply, for only about one case in the treated group occurred, as compared to fourteen cases observed among the control group.[25]

Prolonged use of the sulfa drugs, however, carries with it a number of potential hazards, chief of which are the toxic reactions that may be occasioned by the drug and the development of sulfa resistant strains of streptococci. More desirable, therefore, would be the building of resistance through immunization. Frequent attempts at such immunization have been made during the past four decades but, as yet, none has been more than partially successful. Immuni-

zation, if it is to be of value for the control of streptococcal disease, should develop resistance of fairly long duration, and should be effective against the infective as well as the toxic component of such infections. No immunization procedure thus far has been able to satisfy these requirements.

The development of antitoxin by the Dicks provided fairly adequate protection against the toxic effects of streptococcal infections. Its use was soon found to be not without danger and of limited value, for the protection provided was of short duration, and its use was frequently followed by serum reactions and sensitiveness to horse serum. A safer type of passive immunity has been made possible through the use of convalescent serum. Its disadvantages lie also in its brief protection and in the fact that it is difficult to obtain.

A more permanent type of protection, i.e., active immunization, can be established by the injection of graduated doses of Dick toxin. Until recently such procedure was believed to provide full protection against scarlet fever infection. More recent studies, however, have shown that this form of immunization develops protection only against the recognizable features of scarlet fever, for it provides immunity solely against the toxic component of that disease. As such, it has proved to be of definite value, and is able to effect a significant reduction in the case fatality rates of scarlet fever.

Nevertheless, if the various complications and dangers associated with streptococcal infections are to be avoided or minimized, active immunization procedures must develop resistance against the infective as well as its toxic component. Thus far, however, vaccines prepared to meet such need have proven inadequate.

Some authorities feel that the making of an effective streptococcal vaccine is well nigh impossible. They point out that streptococcal infections can recur quite frequently in the same individual and, therefore, any immunity thereby obtained must be very brief and inadequate. On the other hand, recent studies by DeWahl indicate that individuals who are exposed daily to massive doses of hemolytic streptococci can develop a high degree of immunity to those organisms.[3] Furthermore, experimental studies by Rothbard reveal that the antibodies which develop in the sera of patients convalescing from group A streptococcal infections are type specific and tend to first appear between three to five weeks following the onset of the infection. Such antibodies were found to persist in the sera for at least thirty-seven weeks.[21] The repeated occurrence of streptococcal infections in the same individual could therefore be better explained on the basis of fresh contacts with different strains of streptococci rather than to a lack of immunity to the same strain. The failure of previous vaccines can also now be better understood, for immunity to streptococcal infections appears to be largely type specific, and a vaccine, if it is to be effective, should be made up of those streptococcal types prevalent in the community in which it is to be used. The administration of such a vaccine, in the areas and during the seasons in which streptococcal infections seem to flourish, should be of definite aid in minimizing both the incidence and complications associated with this hitherto uncontrolled menace. The selective use of type-specific streptococcal vaccines can well become our most effective weapon for the future control of streptococcal disease.

Summary

New laboratory methods for the differentiation of the various hemolytic streptococci have been instrumental in the discovery of valuable additions to the epidemiology of scarlet fever. Consideration of scarlet fever in the light of such new experimental findings has resulted in an entirely new understanding of this disease. A brief review of such developments has therefore been presented and the following significant facts have been noted:

1. Scarlet fever can no longer be considered a specific infection, but is rather a disease syndrome caused by any one of a wide variety of hemolytic streptococci. Such syndrome represents the composite effect of two components, namely an infective and a toxic component. The infective component is responsible for those signs and symptoms which are common to all streptococcal infections, while the toxic component is responsible for the scarlatinaform rash. Whether a hemolytic streptococcus will occasion a streptococcal infection or a streptococcal infection accompanied by a rash is dependent both on the amount of erythrogenic toxin produced by such organism and on the amount of antitoxin present in the host. Thus, if sufficient toxin is produced

in a Dick-positive individual, scarlet fever will result. When such toxin is produced in a Dick-negative individual, a streptococcal infection without the rash will usually be occasioned. However, if little or no toxin is elaborated by the attacking pathogen, the resultant effect both in Dick-negative as well as in Dick-positive individuals will be that of a localized streptococcal infection.

2. Measures for the control of scarlet fever must therefore deal with all hemolytic streptococcal infections, and not simply with those which show a rash. Suggested measures for such control include the limitation of the reservoir of infection through the adoption of health regulations which require isolation procedures for all streptococcal infections, and not for scarlet fever alone. To promote effective co-operation with such a regulation, it may be advisable to institute a radical reduction in the isolation period of all such infections.

Further limitation of the spread of streptococcal infections has been attempted through the modification of its transmitting agents. Such measures have concerned themselves with the minimizing of the dispersal of organisms into the air, through the oiling of floors, bedding, et cetra, and the disinfection of the air with ultraviolet irradiation and the use of certain glycol vapors. Results thus far have been suggestive but not conclusive.

Most promising, however, for streptococcal control appears to be the promotion of individual immunity to streptococcal infections through vaccine administration. Previous failures of vaccine prophylaxis are now felt to have been due to lack of appreciation of the variable number of strains present in the hemolytic streptococcal group. Immunity to streptococcal infections appears to be type-specific. Vaccines to be effective must therefore be made up of such strains prevalent in the area in which they are to be used. The selective use of such vaccines can well become a most valuable aid for the control of streptococcal disease.

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It has been estimated that nearly four per cent of all persons who visit physicians' offices complain of cough or expectoration. The alert physician will insist upon a sputum examination of all such patients. Such practice will be rewarded by the discovery of tubercle bacilli in three or four out of every 100 specimens examined. The family doctor will fairly often discover to his astonishment that a patient with slowly resolving pneumonia has an acid-fast reason for prolonged convalescence.—HERMAN E. HILLEBOE, M.D., *Journal-Lancet*, June, 1947.

OSLER IN MINNESOTA

His Interest in Medical Education and Licensure

JAMES ECKMAN, Ph.D.
Rochester, Minnesota

I dare say that in a few generations Osler will be as soundly forgotten as Thomas Watson or even William Jenner, that he will be at most an occasionally cited name. Kind-hearted, honourable gentlemen are common enough to escape a bookish immortality.

—MAJOR GREENWOOD[19]

FIFTY-SIX years ago, William Osler (Fig. 1), just returned to the United States after a wedding trip to England, came out to the University of Minnesota to deliver an address, on October 4, 1892, at the dedication of a new medical building.[12] The next day he spoke, perhaps extemporaneously, before the Minnesota Academy of Medicine in Saint Paul.[43]

Much information concerning this visit by the distinguished internist of Johns Hopkins can be obtained from contemporary sources. But the writer has been uncommonly fortunate in that he has been accorded an advantage conferred upon few historians: the testimony of one who both knew the historical figure concerned and was a witness of the event in question.[65] The late Dr. Frederick J. Wulling (1866-1947), dean emeritus of the College of Pharmacy of the University of Minnesota, became acquainted with Osler in 1889, when Dr. Wulling was an associate of Dr. Samuel Fleet Speir (1838-1896), in Brooklyn, New York. Three years later, when Osler came to the University of Minnesota to dedicate the medical building, he remembered Dr. Wulling at once and greeted him cordially. The two men sat at the same table at the ceremonies—Cyrus Northrop, Governor Merriam and former Governor Pillsbury on one side, and the four deans, Dr. Millard, Dr. Brazie, Dr. Sudduth and Dr. Wulling, on the other. Whatever value this essay may be found to possess has, consequently, been immeasurably enhanced by the material which Dr. Wulling[65] has most generously supplied.

In itself, the visit of Osler to Minnesota is of no particular moment, for the postliminous journeys of the eminent are not, as a rule, calculated to derange the fortunes of commonwealths. What Osler said, on the other hand, considered in the light of medicine and medical practice in Minnesota at the time of his remarks, may be of considerable interest and some value. Minnesota in 1892 had been a member of the Federal Union for only thirty-four years. And although territorial legislators had thoughtfully provided for a medical school in the University of Minnesota in 1851,[2] a department of medicine had not been established until 1883—a department of medicine which was empowered to confer the degrees of bachelor of medicine and doctor of medicine but which actually had no students and offered no courses![9,62*]

The University Address

The building which Osler was to help dedicate is, according to Professor Schmeckebier,[56] a Renaissance type of edifice (Fig. 2). It was erected at a cost of $61,000[23] by L. Lund, Contractor, in 1892.† Both Greene[18] and Beard[10] wrote that Dr. Perry H. Millard (1848-1897), first dean of the University of Minnesota College of Medicine and Surgery, whom President Cyrus Northrop is said[18] to have called "a lesser Napoleon," advanced the money from his own pocket to pay for the structure.° At one side of the entrance

From the Division of Publications, the Mayo Clinic.

*Because, as will be shown herein, the only function of the University of Minnesota Department of Medicine when it was created in 1883 was to examine candidates for the license to practice medicine in Minnesota. The Department of Medicine could confer the degree of bachelor of medicine upon any candidate who passed the examination offered by the faculty, and "To the graduate in medicine it offered the further degree of M.D. upon the presentation and satisfactory defense of an approved thesis." See references.[9, 62]

†Ground for the new building apparently was broken in August or September, 1891. President Northrop of the University of Minnesota was said to have declared, at that time, that the building would be ready for occupancy "by the first of next year," which would be 1892. The building was not even completed, however, when Osler helped to dedicate it on October 4, 1892. See: The University of Minnesota. *Northwestern Medical Journal*, 19:143, (Sept.) 1891.

°Section 10 of chapter 163 of the general laws of Minnesota of 1891 appropriated $80,000 for new buildings for the University of Minnesota, the money to be derived "from any other funds in the state treasury not otherwise appropriated." Half of this amount was to be made available on April 1, 1892; the other half was to be made available on April 1, 1893. The state treasurer announced that in 1891 the sum of $73,488.03 had been paid by him to the university for buildings; in his report for 1892 he said that he had paid to the university for buildings the sum of $36,247.49. See: *General Laws of the State of Minnesota Passed During the Twenty-Seventh Session of the State Legislature Commencing January Eighth, One Thousand Eight Hundred and Ninety-One.* Saint Paul: Pioneer Press Co., 1891, p. 378. See also: *Annual Report of the State Treasurer of Minnesota, for the Fiscal Year Ending July 31, 1891.* Minneapolis: Harrison and Smith, State Printers, 1891, p. 75. See also: *Annual Report of the State Treasurer, of Minnesota, for the Fiscal Year Ending July 31, 1892.* Minneapolis: Harrison and Smith, State Printers, 1892, p. 75.

is a carved inscription which discloses that the building was designed by Reed and Stem of Saint Paul, a well-known architectural firm composed of Charles A. Reed (1858-1911) and Allen H. Stem (1856-1931). This firm, founded in 1892, later designed the Saint Paul Hotel, Saint Paul Auditorium, Metropolitan Opera House of Saint Paul and the Grand Central Terminal in New York City.[54**] The building which Osler dedicated still stands on the university campus. It has been occupied by the College of Pharmacy since 1912, after reconstruction made necessary by a fire which destroyed virtually everything but the walls.[65] On January 9, 1942, the Board of Regents of the University of Minnesota gave the name, "Wulling Hall," to the building.[65]

The writer has not been able to answer the question of who actually invited Osler to make the dedicating address,†† but the occasion very evidently was considered to be of major importance. One newspaper[51] noted that the Board of Regents of the university had sent out 4,000 special invitations to the proceedings, but that since the main lecture room in the new building would accommodate only 500 persons, "hosts of people were unable to take part in the exercises." It is curious to notice that after such energetic preparations on the part of the Regents, most of them were not there.[65]

The program was to begin at 8:00 p.m., but the lecture room was already filled at an early hour.[32] The *Minneapolis Tribune*[33] was uncommonly eloquent:

If old Esculapius, god of medicine, still lingers about looking after the welfare of humanity, he must needs have been pleased last night. For over on the State University campus there was being dedicated to him a new temple. In point of architecture and equipment, this new medical building is not to be surpassed, and its dedication marks another stride in the advance of Minnesota's university. Since first the medical course was taken off paper and made a reality, the college was cramped into an inconvenient building, now the Asbury Hospital, and the students labored under great disvantage [*sic*]. But the new quarters are commodious and modern and the medics are jolly over the prospects.

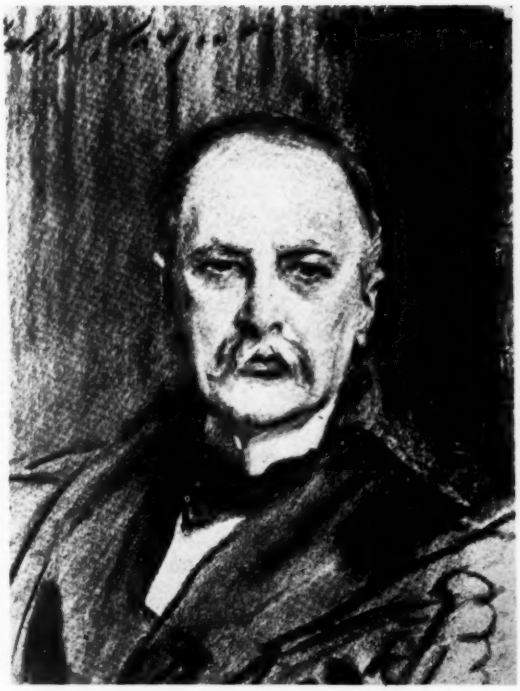

Fig. 1. Sir William Osler, after a charcoal portrait by the noted American artist, John Singer Sargent (1856-1925). Reproduced by permission of the College of Physicians of Philadelphia.

The Reverend Wayland Hoyt (1838-1910), pastor of the First Baptist Church of Minneapolis, opened the ceremonies with a prayer. Governor William R. Merriam (1849-1931) then briefly presented the building to the president of the Board of Regents, former Governor John S. Pillsbury (1827-1901). Cyrus Northrop (1834-1922), president of the University of Minnesota, next introduced, successively, Dr. Perry H. Millard (1848-1897), dean of the College of Medicine and Surgery; Dr. Henry W. Brazie (1843-1927), dean of the College of Homœopathic Medicine and Surgery; Dr. W. Xavier Sudduth (1853-1915), dean of the College of Dentistry; and Dr. Frederick J. Wulling, dean of the College of Pharmacy. Each man gave a brief address. President Northrop then introduced Professor Osler, remarking that since no other institution in the United States had done so much for university work as Johns Hopkins had done, it was fitting that Professor Osler should speak on the occasion at hand.[32]

**Some account of the work of these two Saint Paul architects is to be found in: Marshall, David: *Grand Central*. New York: McGraw-Hill Book Co., Inc., 1946, pp. 248-260.

††The writer had assumed that since the Board of Regents had sent out 4,000 invitations to the event, the Regents probably had invited Osler to speak at the ceremonies. This assumption, it turns out, cannot be proved. The minutes of the proceedings of the Board of Regents are kept in manuscript record books in the office of the comptroller of the University of Minnesota. Proceedings from March, 1868 to 1904 are contained in a volume marked "B 1." On July 10, 1947, W. T. Middlebrook, vice president of the University of Minnesota, advised A. J. Lobb, regent of the University of Minnesota, that search of book "B 1" of the proceedings of the Board of Regents produced no reference to either Osler or the dedication of the building in question in 1892. This information was placed in the hands of the writer by Mr. Lobb.

The circumstances under which Osler was to speak were not so tranquil as one might think now, fifty-six years after the event. He was not visiting a long-established medical school. On the contrary, the faculty before which he spoke had been in existence only four years, and had actually offered courses of instruction for only three years.[10,11,‡] It had come into existence as a result of the amalgamation, in 1888, of the old Saint Paul Medical College, the Minnesota Hospital College of Minneapolis, and the Minnesota Homœopathic Medical College of Minneapolis,[10] largely, it was said, as a result of the labors of its first dean, Dr. Millard.* The professors, ostensibly united as the faculty of the University of Minnesota College of Medicine and Surgery and the College of Homœopathic Medicine and Surgery, naturally could not have been unmindful of the institutions which they had seen obliterated by the union. Divers problems, uncertainties, perhaps even smoldering animosities, must have pervaded the minds of some of the men who had assembled to listen to the words of the celebrated internist from the Johns Hopkins University.

Osler perforce addressed two separate medical faculties that night: the so-called regular medical faculty and the homeopathic medical faculty. The deans of both of these faculties—Perry H. Millard and Henry W. Brazie—were speakers on the same program of which Osler was the major figure.[32,65]

Fig. 2. The medical building at the University of Minnesota which William Osler helped to dedicate on October 4, 1892. This building was burned almost to the walls in 1912, but was rebuilt and thereafter was occupied by the College of Pharmacy. Since 1942 it has been known as Wulling Hall. Drawing from the *Minneapolis Times*, October 5, 1892.

The power of the so-called regular medical faculty was unquestionable, but the strength of the homeopathic practitioners at this particular point in the history of Minnesota cannot be dismissed abruptly. In 1892 homeopathic physicians had had a state society for a quarter of a century.[14,20] At the time, they had two medical journals† of their own, and the *Medical Argus* observed[35] that the homeopathic faculty at the university was planning a third. The homeopaths had had two other medical journals° previously, not including the *Transactions* of their state organization.[15,20] They had a number of homeopathic hospitals. They had had a homeopathic medical college, separate from university control.[15] Only five years before Osler's visit they had had sufficient political power to assure themselves, by act of legislature, of two of the nine members of the reorganized Minnesota State Board of Medical Examiners[5]; as late as seventeen years after Osler's visit they were still powerful enough to assure inclusion, in the appropriation for the expenses of the state government, of a section** which gave them $50,000 with which to erect a new medical building of their own on the campus

‡The College of Medicine and Surgery and the College of Homœopathic Medicine and Surgery of the University of Minnesota were formed in 1888, when the Saint Paul Medical College, the Minnesota Hospital College of Minneapolis, and the Minnesota Homœopathic Medical College of Minneapolis surrendered their charters as a requisite for amalgamation within the University of Minnesota. In 1888 the course of lectures at the College of Medicine and Surgery consisted of a term of three scholastic years, each scholastic year consisting of six months. In 1890 the scholastic year was extended so that it consisted of eight months. In 1894 the term was increased to four years. In the scholastic year of 1910-1911 it was announced that a fifth, or hospital, year would be required for the degree of doctor of medicine, this provision to become effective in the scholastic year of 1914-1915. Not long thereafter the University of Minnesota became one of the first institutions to require that the total period of instruction for a candidate for the degree of doctor of medicine be seven years, including the final year in internship. The degree of bachelor of science or bachelor of arts became a prerequisite to the degree of doctor of medicine; such a baccalaureate could be gained by two years of study in the College of Science, Literature and the Arts and two years of work in the Medical School, or by three years in the arts college and one year in the Medical School. In 1913 the faculty of the Medical School was reorganized to make possible intensive teaching by salaried clinical teachers; private clinics were abolished, and clinical work was concentrated in the University Hospital and the several municipal hospitals. See: Beard, R. O.: An Inventory of the Progress of Medical Education in America and in Minnesota. *Journal-Lancet*, 35:607-609, (Nov. 1) 1915. See also: Rogers, J. T.: President's Address: Team Work. *Journal-Lancet*, 35:602-607, (Nov. 1) 1915.

*The old Minneapolis College of Physicians and Surgeons was opened in October, 1883, offering a three years' graded course consisting of six months' instruction each year. Proper preliminary preparation was required for entrance to the school. During the first five years of its existence, the Minneapolis College of Physicians and Surgeons neither examined its students at the end of the three-year course nor conferred a degree upon them; those who had completed the entire course were sent to the University of Minnesota Department of Medicine to be examined for a degree from that institution. In 1895 the Minneapolis College of Physicians and Surgeons became the department of Medicine of Hamline University, with a faculty of forty-one members. In 1907 and 1908 negotiations were undertaken for merger of the school with the University of Minnesota College of Medicine and Surgery. The merger was effected in March, 1908. See: Moore, J. T.: The College of Physicians and Surgeons. *Journal of the Minnesota State Medical Association and Northwestern Lancet*, 29:45-46, (Jan. 15) 1909.

†These were the *Medical Argus*, published from 1890 to 1898; and the *Minneapolis Homœopathic Magazine*, published from 1892 to 1902. See reference.[35]

°These were the *Minnesota Homœopath*, published in either 1858 or 1859; and the *Minnesota Medical Monthly*, published from 1886 to 1888. See reference.[35]

**Paragraphs 11 and 12 of section 35 of the session laws of 1909. See reference.[1]

of the University of Minnesota, plus $5,000 with which to maintain the building for one year.[1]†† Nineteen years after Osler spoke at the University of Minnesota, the determination of the homeopaths of the state was such that they introduced a bill in the Minnesota State Legislature which, had it been enacted, would have created either a department or a college of homeopathic medicine at the university.°°

What, then, did Osler say to an audience of which the individual convictions were so seriously divergent? He said very little that was remarkable, very little that was new, and nothing that was controversial. No other course was open to him. He condemned independent medical colleges,[44] but so did almost everyone else at that particular time. The president of the American Medical Association, for instance, had considered the thought important enough to be emphasized in his address[16] at the thirty-ninth annual session of the association at Cincinnati in 1888, and the *Journal* of that organization had commended him for his words.[47]

Osler had kind words for the "schools with university connexions," and he approved of what he called "the State schools, of which this college [presumably the University of Minnesota College of Medicine and Surgery] is one of the few examples" because he thought such schools exemplified recognition that medicine was one of the technical branches of learning which ought to be taught in an institution supported by the people at large.[44] This was a subject which Osler's great colleague at the Johns Hopkins University, William Henry Welch (1850-1934), had developed at considerable length in an address[63] given at Yale University in 1888, productive of national attention in the field of medical education.[61]

Osler said that the destiny of any institution rests not in great buildings or much equipment, but on the men who work in the halls of such a place and the ideals which they possess.[44] This was, as Osler disclosed, a notion he had taken from Cardinal Newman. It was also essentially the same thought which Thomas Henry Huxley (1825-1895) had presented to the students and faculty of the Johns Hopkins University during a lecture at that institution in 1876.[21]*‡

"Thoroughly equipped laboratories," Osler said, *"in charge of men, thoroughly equipped as teachers and investigators, is the most pressing want to-day in the medical schools of this country."*[44]

This probably was true in the United States in 1892 and for some years thereafter,† but it was, again, scarcely a new or even different notion. Shryock[57] has shown that in the German university system the value of laboratory research and teaching had been recognized, even as early as 1825, to such a degree that the Germans in that year created "the first genuine laboratories in the modern sense of the term—excepting only the older ones devoted to anatomy."

Welch[64] said that Liebig's laboratory, opened in 1825, was the one which exerted the greatest influence on the subsequent establishment and organization "of public scientific laboratories in general"; that the first physiological laboratory was that of Purkinje, opened in 1824; and that the first pathology laboratory was that of Virchow, founded in 1856. The first laboratory of clinical medicine provided with its own building and sufficiently equipped for research apparently was the William Pepper Laboratory of Clinical Medicine in Philadelphia, opened in 1895.[57,64]

Even in American universities, however, there were laboratory facilities long before Osler's hortatory remarks of 1892. Nor was it a physi-

††It was not built because the Board of Regents in May, 1909, after passage of the act in question, abolished the College of Homœopathic Medicine and Surgery. See reference [11] for details.

°°The measure was House File No. 315, "A Bill for an Act to Amend Section 1479 of the Revised Laws of Minnesota and Creating a College or Department of Homeopathic Medicine and Surgery," and it was introduced by Dr. Henry R. Diessner (1853-1935), of Waconia. See reference.[40]

*The appearance of Huxley as lecturer at this university in 1876 seems to have been greatly resented by the citizens of Baltimore, who had already feared that the new institution, so extensively devoted to the natural sciences, would be hostile to religion. The Baltimore *American* attacked Huxley as a champion of the theory of evolution, than which "there is no more frightful heresy extant," and when it was observed that his lecture was not preceded by a prayer, the fact was advanced as indication of the contempt of the new university for religion. See: French, J. C.: *A History of the University Founded by Johns Hopkins.* Baltimore: Johns Hopkins Press, 1946, pp. 82-83.

‡It is interesting to notice that in 1947 the president of the Johns Hopkins University inveighed against the ideas of both Huxley and Osler in this respect: "Opinions run in packs, and new private foundations are generally insisting that their policy is 'no money for bricks and mortar.' It seems so plausible to say, 'This money must go into productive work, not bricks and mortar. We want to see immediate results. We want to feel that our grant has created a new and useful piece of knowledge.' No one seems to see that the scholar does his best work when he is sheltered from rain and frost. We all remember the work on pitchblende that the Curies did in their search for radium, but we forget the hardships they endured in winter as they worked in a cold shed with a leaky roof. Someone, somewhere must build laboratories and classrooms, train young scholars, and hold to a steady course of support as promising men grow to maturity—or there will be no discoveries." See: Bowman, Isaiah: *The Johns Hopkins University: Report of the President, 1946-1947.* Baltimore, 1947, p. 29.

†For instance, one of the reasons advanced by the *St. Paul Medical Journal* for the passing of the Hamline University Medical School in 1908 was that the institution was deficient in anatomy, physiology, chemistry, pathology and bacteriology laboratories. "These laboratories, the Hamline school, which was a private corporation with very little capital, could not maintain as they should be maintained and with such a handicap it could not make good." See: The Passing of the Hamline Medical School. *St. Paul Medical Journal,* 10:211-212, (Apr.) 1908.

cian, according to Professor Nevins,[34] who led the way for reform of medical education in America. He identified Charles William Eliot (1834-1926), president of Harvard University, as the man who, against "an incredible weight of conservative opposition," in the early seventies not only insisted that the Harvard Medical School extend its schedule to three full years of eight or nine months each, but also demanded and secured the establishment of laboratory training in medicine and forced the medical faculty to give severe written examinations to the students.*

Schlesinger[55] wrote that between 1878 and 1898 in the United States, private benefaction added $140,000,000 to the funds available for higher education, so that "Amply equipped for the first time with tools of research—laboratories, instruments of precision, libraries, museums, observatories, hospitals—scholars and scientists in the United States were enabled to make a contribution to the world's learning fully comparable to that of the first nations of Europe."

So far as the University of Minnesota is concerned, it is noteworthy to discover that seventeen years after Osler's plea for laboratories and laboratory workers, W. J. Mayo declared that the prime need of the university was a clinical hospital.[27] This declaration was made in the course of a short address in which he did not once mention laboratories.

Half a century after Osler's remarks at the University of Minnesota, the laboratory apparently had assumed such fearsome proportions that perhaps even the Regius professor of medicine at Oxford would have reconsidered the fervor of his adjuration of 1892:

> The teaching of medicine as conducted today in the average medical school has brought forth a crop of young physicians who seem to depend too much on laboratory procedures. Much of the bedside teaching in these schools has drifted into the dialectics of mechanised and biochemical data. The rapid strides in biochemical studies, the extension of mechanical procedures in contrast to the good history and physical examination, has [*sic*] crowded out clinical perception and dulled clinical judgment.
>
> We must reverse this tendency and insist on a good analysis of a history and a physical examination before any laboratory investigations are done.[24]

In the address of 1892 is discernible a conviction—"Insensibly, in the fifth and sixth decades, there begins to creep over most of us a change, noted physically among other ways [by] the silvering of the hair and that lessening of elasticity which impels a man to open rather than to vault a five-barred gate"[44]—which reached full expression thirteen years later in a farewell address Osler gave at the Johns Hopkins University on February 22, 1905.[45]**

After the address, most of the physicians in the audience lingered to attend an informal reception in honor of Osler.[65] Osler requested Dean Wulling to remain at his side, and asked him to repeat to him the names of some of the physicians whom Dean Millard presented to him. Dean Wulling recalled that on this occasion Osler seemed not to be as good a conversationalist as usual, but the Johns Hopkins professor responded cordially to each introduction, and at length remarked to Dean Wulling that he was glad to have made so many friends in Minnesota.[65]

The reactions to Osler's address were varied. A student in the College of Pharmacy who had just been graduated from a high school said it was the best speech he had ever heard; a student in the College of Dentistry thought Osler's words were "over his head"; a student in the College of Medicine and Surgery declared that Osler's remarks were addressed to minds inferior to those of medical students. President Northrop, a few days later, allowed that Osler's address was "good, for a medical man."[65] One Minneapolis newspaper said that Osler treated his subject in "an able and learned manner"[32]; another referred to the speech as "a masterly address."[33] Cushing[12] many years later adjudged the address to be one of the most effective Osler ever made.

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*This apparently was a prospect which evoked deep consternation, for the dean of the Harvard Medical School is said to have exclaimed in 1870 that it was impossible to give written examinations in the medical school because "a majority of the students cannot write well enough." See reference.[34]

**This was the famous piece which he called "The Fixed Period," after Anthony Trollope's novel, *The Fixed Period*. Osler's address created an uproar in the public prints because it was charged that he had urged that all men more than sixty years old should be chloroformed. Actually, he did not, as study of "The Fixed Period" will show. In 1906, writing from the relative security of Oxford, Osler explained his misjudged remarks of the previous year: ". . . to relieve a situation of singular sadness in parting from my dear colleagues of the Johns Hopkins University, I jokingly suggested for the relief of a senile professoriate an extension of Anthony Trollope's plan mentioned in his novel, *The Fixed Period*. To one who had all his life been devoted to old men, it was not a little distressing to be placarded in a world-wide way as their sworn enemy, and to every man over sixty whose spirit I may have thus unwittingly bruised, I tender my heartfelt regrets. Let me add, however, that the discussion which followed my remarks has not changed, but has rather strengthened my belief that the real work of life is done before the fortieth year and that after the sixtieth year it would be best for the world and best for themselves if men rested from their labours." See: Osler, William: *Aequinimitas, With other Addresses to Medical Students, Nurses and Practitioners of Medicine*. Philadelphia: P. Blakiston's Son and Co., 1920, ed. 2, p. viii.

Any critical analysis of Osler's remarks on this occasion should be made in the light of the situation in which he found himself on that evening. He was in the midst of strangers. He faced a divided audience: on the one side were the so-called regular faculty members; ranged against them were the numerically fewer homeopathic faculty members†† who nevertheless could rely upon powerful political support within the state. In other quarters of the university, the medical faculty and students were regarded as "barbarians" and the opening of the new medical building was viewed with disfavor if not alarm.[11]

Finally, the University of Minnesota itself was relatively new, with no great endowments or other forms of formidable resources, and as such was understandably sensitive to the opinions of a man associated with scholars as illustrious as those of the Johns Hopkins University. Considerations such as these must have passed through the mind of Osler as he faced the audience at the University of Minnesota on the October evening in 1892.

The Saint Paul Address

In Saint Paul, Osler was a guest of Dr. Albert E. Senkler (1842-1899), at the latter's home at 177 Virginia Avenue.[53]‡ On October 5, 1892, the evening of the day after the university address, Osler was entertained at the Minnesota Club, Fourth and Cedar Streets, by members of the Minnesota Academy of Medicine.[52] A list of the physicians who attended the meeting, as published in a Saint Paul newspaper the next day, includes the names of some of the most prominent practitioners in the state; they came from such distant places as Brainerd, Saint Cloud, Winona, Albert Lea, Northfield and Faribault, as well as Minneapolis and Saint Paul.[52] After the dinner, the guests adjourned to the House of Representatives in the State Capitol at Tenth and Wabasha Streets. There Osler spoke on "License to Practice."[43] His remarks were by no means new, for he had delivered much the same address in 1889 before the Medical and Chirurgical Faculty of the State of Maryland, and by the time he spoke in Saint Paul his address had already been printed in at least four different publications three years earlier.[39-42] The text of the Saint Paul address[43] does not conform *verbatim* to the text of the previous versions, for it is greatly condensed, but in a large part the substance is essentially identical.

He began by saying that it was a pleasure to elaborate this subject to physicians of Minnesota[43]—"a state which stands foremost in the attempt to regulate the practice of medicine." He had praised Minnesota in the same respect three years earlier.[39-42] Next, however, he deplored the fact that the United States was the only country in the world in which the doctorate carried with it the right to practice medicine.[43] Germany, he said, required the most rigid examination of all before a physician was admitted to practice; the German examination was, he thought, the "most thorough and systematic examination in medicine in the world."[43] In Great Britain the degrees of the Royal College of Physicians—which is not a teaching institution—as well as the degrees of certain older universities, constituted licenses to practice. Canada, Osler declared, had the best plan of all. Each province was divided into districts; in each district forty physicians were elected by their fellow practitioners, and constituted a board of control over medical matters. The board in turn appointed an examining body, before which must come all physicians who wished to practice medicine in the particular district. "I trust that the State of Minnesota," Osler concluded, "which has progressed so far in the restriction of medical education, will, with other states, go still farther and adopt the Canadian plan"[43]—the same plan he had praised in a previous address on the same subject in 1889.[39-42]

Why should Osler have chosen the subject of medical licensure at this time, and why did he twice commend Minnesota for the progress it had made in medical licensure? The answers to these questions may be found in a paper published in 1921 by Beard,[11] who revealed that he was a member of the legislative committee which drafted the Minnesota medical licensure act of 1887.[5] This act, Beard said, created "an independent Board of Medical Examiners under the first law of its type, known as the examination law, enacted

††In the first year of medical instruction in the University of Minnesota all students—so-called regular, homeopathic and dental—attended the same courses, in which only anatomy, physiology and chemistry were taught. At the end of this first year, the medical student could decide whether he wished to continue in the College of Medicine and Surgery or to enter the College of Homœopathic Medicine and Surgery. The three-year course was said to have been "modeled after that pursued at the Harvard Medical School." See: The Medical Department of the State University. *Northwestern Lancet*, 8:137, (May 15) 1888.

‡Greene in 1920 recalled Dr. Senkler as "that gifted, modest, all-around man, Dr. A. E. Senkler, the simplicity and clarity of whose lectures was [*sic*] the direct reflection of his analytic, orderly, and systematic modes of thought." See reference.[18]

in the United States. It discarded the diploma as an evidence of medical education. It required an examination of every applicant for license to practice medicine in Minnesota."[11] This was the law to which Osler alluded in his Saint Paul address[43] in 1892, and since it was said to be the first law of its kind enacted in the United States, it is not difficult to see why he should have displayed some enthusiasm over it.

Yet this licensing law of 1887, like most works of value, did not spring spontaneously from the Legislature of 1887. It had two largely unsatisfactory predecessors which must be understood before the act in question can be fully appreciated.

The history of medical licensure in Minnesota has not been written. Rush's thesis[50] of 1931 would appear to deal with the problem, for he announced that he proposed to "give something of the historical background [of medical licensure in Minnesota] where that seems to be necessary." Actually, however, Rush almost wholly ignored historical development when he investigated the licensing of practitioners of the healing arts in Minnesota.

It is of some moment to observe that even in territorial days, Minnesota contrived obliquely to regulate the practice of medicine to a slight degree. Chapter 19 of the revised statutes of 1851*† empowered county medical societies to examine medical students who were at least twenty-one years old, had "a good English education," had studied medicine for at least three years "with some respectable practitioner," and had a "good moral character."[37]†† The standard fee for such an examination was $10, which entitled the successful candidate to a diploma indicative of a membership within the society, signed by the president of the society. An additional fee not to exceed $3 could be charged by the society "for the purpose of procuring a medical library, anatomical cabinet, chemical apparatus, or for the encouragement of useful discoveries in the science of medicine."[37] It is to be noticed that this statute did not, however, pertain to licensure. A man was free to practice medicine in the territory, with or without the degree of doctor of medicine. In many respects, this statute of 1851 is not greatly different from one of 1781 in Massachusetts, which incorporated the Massachusetts Medical Society and provided for the examination of candidates for membership in that organization.[26]

The first state law which regulated the practice of medicine in Minnesota is found in chapter 41 of the general laws enacted by the Legislature of 1869.[3] This law, approved by Governor William R. Marshall (1825-1896) on March 9, 1869, likewise did not require the candidate for licensure to possess the degree of doctor of medicine. He could (1) have attended two full courses of medical instruction and been graduated from some school of medicine in either the United States or a foreign land, or (2) present a certificate of qualification from some state, district or county medical society. There was no examination of any kind. The candidate was obliged only to present his diploma or his certificate to the clerk of the district court of the district in which he practiced, by October 1, 1869. If he could not produce either document, he could not practice medicine in Minnesota. Violation of the statute was punishable by a fine of not less than $50 and not more than $100. A second violation could be punished by the fine plus incarceration for thirty days in the county jail in the county concerned.[26]

The statute was repealed by chapter 47 of the general laws of Minnesota passed by the Legislature of 1870, signed by Governor Marshall on February 24, 1870.[7] The law of 1869 is of some interest in that, according to sections 1 and 3, the State of Minnesota took official cognizance of certification of a candidate's qualifications by a medical society. Such a feature was by no means new, however, for in 1819 the State of Massachusetts by legislative act had authorized the Massachusetts Medical Society to appoint medical examiners in each county and to license those candidates who passed the examinations; each person licensed was to file his license in the office of the clerk of the

*Passage of this territorial statute concerning county medical societies would appear to strengthen, but not confirm, Armstrong's contention that a "Minnesota Medical Society" was organized in the Territory of Minnesota on July 23, 1853. The records of this territorial medical society, if indeed it existed, have not been found. See: Armstrong, J. M.: History of Medicine in Ramsey County. *Minnesota Medicine*, 22:251-257, (Apr.) 1939.

†This statute subsequently became sections 1 through 14 of chapter 17 of the public laws of the State of Minnesota, 1858, which chapter was entitled "Corporations, Their Formation and Regulation." See: *The Public Statutes of the State of Minnesota.* (1849-1858.) *Compiled by Moses Sherburne and William Hollinshead, Esqrs., Commissioners.* Saint Paul: Pioneer Printing Co., 1859, pp. 277-279.

††Section 5 of chapter 108 of the same statutes specifically mentioned physicians in another aspect of medical regulation: "If any physician or other person, while in a state of intoxication, shall prescribe any poison, drug or medicine, to another person, he shall be punished by imprisonment in the county jail not more than one year, or by fine not exceeding five hundred dollars." See: *The Revised Statutes of the Territory of Minnesota, Passed at the Second Session of the Legislative Assembly, Commencing January 1, 1851.* Saint Paul: James M. Goodhue, Territorial Printer, 1851, p. 521.

town in which the man proposed to practice.[26] This brings to mind a rather formidable power enjoyed by the old Minnesota State Homœopathic Institute: that of conferring the degree of doctor of medicine on any member considered by the censors worthy of the honor. Dr. H. A. L. Von Wedelstaedt (1817-1900), of Saint Paul, received such a degree in 1867.[14,17]

Between 1870 and 1883 there was no regulation of the practice of medicine by the State of Minnesota. Chapter 125 of the general laws of Minnesota of 1883 is the so-called diploma law,[4] signed by Governor Lucius F. Hubbard (1836-1913) on March 5, 1883. The essential features of this law, according to Millard,[31] who Greene[18] said was responsible for the introduction and passage of the bill to create the act, were copied from the Illinois licensing law[22,30,46] which became operative on July 1, 1877.** Section 2 of this statute required the University of Minnesota Department of Medicine to organize itself as a board of medical examiners. If a man had a valid diploma demonstrating that he was a doctor of medicine, he was licensed at once; if he had no diploma,†† he was to be examined before the board. Each man licensed by the presentation of a diploma paid a fee of $1; each man licensed by examination paid a fee of $5. The person licensed was given a certificate from the board which he recorded in the clerk's office of the county in which he resided.[4]

The penalty for neglect or refusal to comply with this act was a fine of not less than $50 and not more than $500, or incarceration in the county jail for not less than thirty days or not more than 365 days, or both the fine and the imprisonment. Any physician who had been practicing medicine in Minnesota for five years at the time the bill became law was exempted from its provisions.[4]

The constitutionality of this law was argued before the Minnesota State Supreme Court°° in 1884 and 1885,[13,58-60] but the law was upheld by the court in all particulars.*

It is seen, then, that the present University of Minnesota Medical School, actually created by the Board of Regents on January 5, 1883,† came into existence to function solely as a state board of

**Comparison of the text of the Minnesota law of 1883 with the Illinois law of 1877 shows that in some sections the text is identical. Millard himself wrote (reference [31]) that the Minnesota law of 1883 was "a verbatim copy of the present Illinois Act, except that the exemption clause was five years instead of ten, which is the period of exemption of the Illinois Act." The two acts also differed in the nature of the licensing bodies and in penalties for violation of the law.

††The University of Minnesota Department of Medicine, apart from its powers as the state board of medical examiners as conferred by the law of 1883, could grant the degree of doctor of medicine to such persons as were able to qualify for the degree. The old Minneapolis College of Physicians and Surgeons, which opened in October, 1883, for the first five years of its existence did not grant the degree of doctor of medicine to any of its graduates; instead, it sent them to the University of Minnesota for graduation. Hence, graduates of the Minneapolis College of Physicians and Surgeons during that period received the doctorate in medicine from the University of Minnesota. See: Moore, J. T.: The College of Physicians and Surgeons. *Journal of the Minnesota State Medical Association and Northwestern Lancet*, 29:45-46, (Jan. 15) 1909.

°°Briefs in the cases in question are on file in the Minnesota State Library in the Capitol in Saint Paul.

*In the first instance, Dr. David F. Powell of La Crosse, Wisconsin, presented his diploma from the Louisville Medical College dated February 28, 1873. The Minnesota State Board of Medical Examiners found that the diploma was genuine, but that Dr. Powell, by advertising himself in newspapers and circulars as a medicine man of the Winnebago Indians, adopted by them and styling himself "White Beaver," and claiming that he had a remedy which would cure cholera morbus if taken internally and rheumatism if applied externally, had been guilty of unprofessional and dishonorable conduct. The board therefore refused to issue a license to Dr. Powell. Dr. Powell thereupon obtained an alternative writ of mandamus from the Ramsey County District Court which would have required the Minnesota State Board of Medical Examiners to issue a license to him. The Minnesota Supreme Court on July 19, 1884, handed down the decision that (1) Dr. Powell had the right to be heard on the subject of the investigation of his conduct by the board, (2) the word "unprofessional" in section 9 of the Act of 1883 was used convertibly with "dishonorable," and had a like meaning, (3) the act itself was not unconstitutional, and (4) Dr. Powell was not entitled to remedy by mandamus to secure review of the correctness, or the reversal, of the determination of the board. See reference.[58]

In the second instance, the challenge of the act by the plaintiff, Dr. Edward D. Chapman, was based on curious reasoning. He had been licensed by the Minnesota State Board of Medical Examiners, but in June of 1885 the board had served written notice upon him of unprofessional and dishonorable conduct, and had notified him to appear before the board to show why his license should not be revoked. Dr. Chapman obtained a writ of prohibition against the board, and asked to have it made permanent. He argued that the license to practice medicine, once granted, was private property, and that revocation of such a license was exercise of judicial power, which he alleged could not be vested in any executive or administrative board or even in the Legislature itself, but only in the courts. Hence, he said, to assume to vest this power in a state board was to deprive persons of private property without due process of law, and violated the Constitution of Minnesota. The Minnesota Supreme Court on December 24, 1885, held that the revocation of a license to practice medicine in Minnesota by the Minnesota State Board of Medical Examiners was not an exercise of judicial power, and that, hence, the power of revocation of such a license could, constitutionally, be vested in the board in question. See reference.[59]

In the third instance, Dr. E. C. Feller had applied for a writ of prohibition to restrain the Minnesota State Board of Medical Examiners from further action in proceedings instituted to revoke, on the ground of alleged unprofessional and dishonorable conduct, a certificate issued to Dr. Feller enabling him to practice medicine in Minnesota. Dr. Feller had held that his conduct was a breach of professional ethics only, and was not unprofessional or dishonorable. The medical examiners had held that Dr. Feller, in claiming to be able to cure *all chronic* nervous diseases and diseases of the blood and skin of both sexes, *all* diseases of the eyes and ears without the use of injurious drugs or hindrance of the patient from business, *all* old, lingering constitutional diseases, and his use of terms such as *cured for life*, had published false statements which he knew to be false. The medical examiners held that Dr. Feller had published such statements *"with intent to deceive and impose on the public.* If true, this is unprofessional and dishonorable conduct of the grossest kind." Dr. Feller also charged that the board of medical examiners had exceeded its authority because it had cited him to show cause not only why his certificate should not be revoked, but also why he should not be debarred *forever* from the practice of medicine in Minnesota. The Minnesota Supreme Court, however, quashed Dr. Feller's application for a writ of prohibition, remarking that if Dr. Feller's certificate were revoked by the board, the legal effect would be forever to debar him from the practice of medicine in Minnesota, unless the statute itself were revoked or unless a new certificate were issued to him. See reference.[60]

†The Board of Regents, in creating the Department of Medicine, are said to have adopted the plan submitted to the Board on June 29, 1882, by Dr. William Watts Folwell (1833-1929), then president of the University of Minnesota; Dr. William H. Leonard (1825-1907), a pioneer homeopathic physician of Minneapolis; and Dr. Charles N. Hewitt (1835-1910), of Red Wing, founder of the Minnesota State Board of Health and Vital Statistics in 1872. See: Folwell, W. W.: *A History of Minnesota.* Saint Paul: Minnesota Historical Society, 1930, vol. 4, pp. 422-423.

medical examiners,[62] for the school as then organized offered no courses. Beard[9,10,11] wrote that the legal origin of the University of Minnesota Medical School was "the state constitution of 1853," but this is palpably an error, for Minnesota was not a state in 1853, and had no state constitution prior to 1857, as the monograph by Anderson and Lobb[8] plainly shows. Rather, the University of Minnesota Department of Medicine was specifically provided for in section 10 of chapter 3 of the territorial laws of 1851[2]; this was affirmed in section 10 of the revised territorial laws of 1851[38] and in section 2 of chapter 1 of the general laws of Minnesota of 1868,[6] as well as in section 2 of chapter 125 of the general laws of Minnesota of 1883.††[4]

But it was the licensure law of 1887[5] which drew Osler's attention and commendation. As chairman of a committee appointed to study medical licensure in the United States, Millard[30] in 1889 told members of the American Medical Association that he himself had drafted the bill to create the act of 1887, on the basis of some five years' experience as executive officer of the old board brought into existence by the previous act of 1883.** The act of 1887, in which Beard[11] also seems to have had a hand,†† was signed by Governor Alexander R. McGill (1840-1905) on February 28, 1887.[5,28,42] The law provided for a board of nine medical examiners, each of whom was to serve for three years, with the exception of those nine persons who constituted the original membership of the board. Of the latter, three were to serve for one year, three were to serve for two years, and three were to serve for three years, from the date of appointment by the governor. No member could serve for more than two terms; no member could be a member of any college or university which had a medical department.[5] The latter provision thus effectively prevented any member of the old board of medical examiners, created by the act of 1883 and still in existence up to the time of application of the act of 1887, from being appointed to the new board.°°

The first section of the law of 1887 required that two members of the board be homeopathic physicians,* but nothing whatever was said as to the qualifications of the other seven members; it was not even necessary legally, that they be physicians—an objection promptly pointed out by the *Journal of the American Medical Association.*[29] "The Governor . . . has taken the clause providing that two of the board shall be homeopaths to mean that there shall be just two homeopaths appointed and no more, and has followed that interpretation in these appointments," the *Northwestern Lancet*[36] observed.

The law of 1887 required anyone who wished to practice medicine or surgery in Minnesota to apply to the board of medical examiners for a license.[5] The candidate had (1) to undergo examination in a number of branches of medicine and the basic sciences† and (2) to present evidence of his or her attendance at three courses of lectures of at least six months each. A license to practice medicine could be granted only by consent of no fewer than seven of the nine examiners. A license could be revoked for "unprofessional, dishonorable or immoral conduct." Once granted, the license had to be filed with the clerk of court of the county in which the applicant proposed to

††But the Department of Medicine was not mentioned in chapter 80 of the general laws of Minnesota of 1860, which chapter provided for the government and regulation of the University of Minnesota. Section 10 of this law merely provided that "The University shall consist of such departments as the Board of Regents shall determine, subject to the provisions of this Act, and the same may be altered or changed as they may prescribe." See: An Act providing for the Government and Regulation of the University of Minnesota. In: *General Laws of the State of Minnesota, Passed and Approved during the Second Session of the State Legislature, commencing December seventh, One Thousand Eight Hundred and Fifty-Nine, and Terminating March Twelfth, One Thousand Eight Hundred and Sixty.* Faribault: Orville Brown, State Printer, 1860, pp. 264-268.

**In 1887 Millard was first vice president of the American Medical Association. Speaking before the Section on State Medicine of the association in that year, he remarked: "We have not an ideal Medical Practice Act in any State in the Union. The nearest approach thereto is the new Act of Minnesota. By the provision of this Act, every person commencing the practice of medicine must pass an examination and furnish satisfactory evidence of having taken three full courses of lectures of not less than six months' duration each." See: Millard, P. H.: The Propriety and Necessity of State Regulation of Medical Practice. *Journal of the American Medical Association,* 9:491-493, (Oct. 15) 1887.

††Actually, the bill to create the law of 1887 seems to have been framed by a joint committee of physicians of both the homeopathic and so-called regular persuasions. Dr. Chester Goss Higbee (1835-1908), a homeopathic practitioner, writing in the old *Medical Argus* of Minneapolis in 1893, declared that he "was a member of the joint committee of the two dominent [*sic*] schools of medicine, that framed the bill" of 1887. Dr. Higbee complained bitterly that someone had substituted an "and" for an "or" after the bill had been agreed upon by this joint committee, and he charged that what would have been simply a law permitting licensure by diploma had, by the substituted conjunction, been converted covertly into a law which required graduation from a reputable medical college and also examination by the board of medical examiners. See: Higbee, C. G.: The Medical Law of Minnesota. *Medical Argus,* 3:137-138, (Mar.) 1893.

°°Members of the old Minnesota State Board of Medical Examiners created in 1883 met for the last time in the State Capitol in Saint Paul on July 5, 1887; members of the new Minnesota State Board of Medical Examiners created by the act of 1887 met for the first time in the same place at the same time. See: *Northwestern Lancet,* 6:375-376, (July 1) 1887.

*Governor McGill appointed, in fulfillment of this particular clause, Dr. Henry C. Leonard (1849-1925) of Fergus Falls, and Dr. Frederick C. Bowman (1849-1938) of Duluth.

†In anatomy, physiology, chemistry, histology, materia medica, therapeutics, preventive medicine, practice of medicine, surgery, obstetrics, diseases of women and children, diseases of the nervous system, diseases of the eyes and ears, medical jurisprudence "and such other branches as the board shall deem advisable."

practice. Once a year each clerk of court had to send a list of all certificates on file in his office to the secretary of the Minnesota State Board of Medical Examiners, and the record kept by each clerk of court had to agree with the record for that county maintained by the secretary of the state board.

Physicians commissioned in the army or navy, physicians called to Minnesota for consultation from other states, and medical students practicing medicine under the direct guidance of a preceptor were exempt from the provisions of the act. Those physicians who had been licensed under the act of 1883 were automatically licensed by the act of 1887,[5] which repealed the law of 1883.[4]

Anyone who practiced medicine or surgery in Minnesota without a license from the new board, or who practiced contrary to the provisions of the act of 1887, was to be considered guilty of a misdemeanor and, if convicted thereof, could be fined not less than $50 nor more than $100, or could be imprisoned in the county jail for not less than ten days nor more than ninety days.[5] Both fine and imprisonment could be imposed on an offender. Justices of the peace and the respective municipal courts had jurisdiction over violations of the act; the respective county attorneys were to prosecute offenders.

Osler in his more extended remarks of 1889[39-42] had recognized that the power to regulate the practice of medicine rests with the state. But he had not approved of the practice whereby the governor of a state or the medical societies thereof appointed the medical examiners: "Theoretically, there can be no question (particularly in democratic communities) that a State board should be elective, not appointed by the Governor or the societies."[40]

What Osler wanted must be set forth in terms of the three different ways in which a physician might be licensed: (1) by the simple presentation of a diploma, (2) by examination of the candidate before a board of medical examiners appointed by the governor of a state or by the medical societies thereof, and (3) by examination of the candidate before a board of medical examiners elected by physicians themselves.

In 1889 Osler had abhorred the first scheme and had not been enthusiastic about the second one, but the third had won his untempered favor.[40] In 1892, three years later, his views were essentially the same,[43] yet it is patent that it is licensure by a state board appointed by the governor which prevails today, and not licensure by boards elected by physicians.

Osler's plan for licensure would have removed the regulation of medical practice further away from the sphere of the state government, and therefore from governmental jurisdiction, for his ideal "medical parliament" would not be concerned merely with licensure. It would, first, regulate "the minimum standard of education required in entering the profession."[40] Second, it would examine and license candidates for the practice of medicine. Third, it would carry out prosecution of irregular and unlicensed physicians and "exercise such additional powers as might, in the opinion of the framers of the bill, be thought justifiable." All these powers would reside in the elective "medical parliament" which Osler advocated.

Actually, however, Osler's "medical parliament" would possess what might be called plenary powers, for it would "take cognizance of all matters related to medical education, and, perhaps, although of this I am not so sure, of questions of public health within the State."[40] Such a concept seems rather distant from the theory of democratic control which Osler had advanced at the outset, for in its widest implications it would combine legislative, judicial and executive functions, to the exclusion of those representatives of the people who are elected by the ballots of all citizens.

The *Journal of the American Medical Association,* commenting on Osler's views in 1889, was quick to perceive the superiorities of a system in which the laws of the state itself would guide the actions of the state board of medical examiners, regardless of whether the examiners were appointed by the governor or elected by physicians legally authorized to practice.[25]

This journal, moreover, elaborated two points which it believed Osler had not considered sufficiently: (1) that any state board of medical examiners, however constituted, would fail unless the law of the state explicitly defined the minimal standard of general education necessary for entrance upon the study of medicine and also defined the minimal standard of medical requirements necessary for practice, and (2) that the powers of any state board of medical examiners should be purely executive and not legislative.[25]

The Saint Paul address of 1892[43] is much shorter than that of 1889[40]; it occupies but a single page in the *Northwestern Lancet*. But the central theme of a "medical parliament" appears once again, and strongly. "The election of a medical parliament by the medical profession to control medical affairs is alike to the interest of the practioner and the public."[43] He hoped Minnesota would create such a parliament as the state medical licensing body.[43]

Another thought advanced by Osler in his address of 1889[40] also drew the fire of the *Journal of the American Medical Association*.[25] Osler had proposed that all physicians, whatever their persuasion or training, be subjected to the same examination for licensure, with the single exception of the section devoted to therapeutics. In therapeutics, he thought, an eclectic physician might be examined in eclectic therapeutics; a regular physician might be examined in regular therapeutics; a homeopathic physician might be examined in homeopathic therapeutics.

This was untenable to the *Journal of the American Medical Association:* "On the contrary, every applicant should be examined and be required to furnish evidence of having a fair knowledge of all systems. No student of regular medicine should be licensed to practice unless he also understands clearly the distinctive facts and principles of homeopathy, eclecticism, and every other *ism* that he is to come in contact with among the people. And no student of any one of these pathys or isms should receive a license to practice unless he is also possessed of a good knowledge of the regular therapeutics as practiced by more than nine-tenths of the medical men of Europe and America."[25]

In his Saint Paul address of 1892, however, Osler repeated his contention: ". . . after all, the homœopaths only differ from the regulars in therapeutics. . . . And I do not differ more from my erring homœopathic brethren in the matter of therapeutics than I do from many of my regular brethren who write shot-gun prescriptions a yard long and fire them indiscriminately at their suffering patients."[43] He was quite willing that all candidates for licensure be subjected to the same examination in anatomy, physiology, surgery, obstetrics, pathology and practice, for "there is no homœopathic anatomy or physiology; no homœopathic surgery; no homœopathic midwifery; no homœopathic pathology; no homœopathic practice; there is only therapeutics of special difference."[43]

Osler's rather bizarre conception of the examining board for licensure in medicine never was accepted in the United States. By 1895—three years after he had spoken in Saint Paul—twenty-one states had the examination system for licensure, with the authority of the state government buttressing the examiners.[55] Fourteen other states would allow only graduates of accredited medical colleges to practice medicine. The "medical parliament" was nowhere in existence, nor, as Osler conceived it, does it exist in this country today. In medical licensure the authority of the state is supreme.

Yet Osler's preoccupation with medical licensure half a century ago should not obscure his real objective, which was of the utmost virtue and which has been largely attained today. For licensure in itself he probably cared very little. What vitally interested him was the improvement of medicine itself. If a physician could be licensed to practice medicine merely by the presentation of his diploma, then the medical college which had graduated him was, in effect, the licensing agent. Such a medical college might be a first-rate institution or a school of indifferent standards or even fraudulent conduct. A Philadelphia newspaper editor in 1880 encountered no difficulty whatever in purchasing two degrees of doctor of medicine, two doctorates in law, one degree of master of electrotherapeutics and one degree of doctor of sacred theology, from among six institutions duly incorporated by the state.[55]

If, on the other hand, the physician were required to undergo examination by the state, without regard to the institution from which he had received his diploma, then each school of medicine would be forced to offer instruction of such integrity that its graduates could reasonably expect to satisfy by examination any requirements a state licensing board might exact of them. Poor schools inevitably would decline; the quality of the training of the physician would improve; medicine itself would benefit immeasurably. This was Osler's primary concern. No one today can deny that it was eminently sound.

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THE ROLE OF THE ELECTROCARDIOGRAM IN CARDIAC DISEASE

HARRY L. SMITH, M.D.

Rochester, Minnesota

ELECTROCARDIOGRAPHY has been used clinically for about fifty years. Its use stems back to the discovery that when a frog's heart contracts, it produces an electric current. For many years the electrical current of the hearts of animals was studied by use of a very crude apparatus. At first, the electrocardiogram was helpful clinically mainly in interpretation of cardiac arrhythmias. Great progress has been made in the mechanism and efficiency of the electrocardiograph, and greater progress has been made in the interpretation and clinical application of the electrocardiogram, especially in the past few years. Few fields of medicine have seen more noteworthy development than has electrocardiography.

Electrocardiography has developed to the point at which cardiac examination is not considered complete unless an electrocardiogram is made and, in the main, this is essentially the correct attitude. At times, the information furnished by an electrocardiogram is just as accurate and definite as that furnished by any known laboratory procedure. There are instances in which the electrocardiogram alone will enable the physician to make an accurate diagnosis. However, because of this fact, electrocardiography has been overemphasized and its use is often abused. Today, many electrocardiograph machines are in the hands of physicians who are not sufficiently trained to interpret electrocardiographic tracings correctly. Often, some insignificant changes in an electrocardiogram are incorrectly interpreted, and on this false basis alone a diagnosis of serious heart disease is made, with the result that the patient is needlessly condemned to a life of invalidism.

In the present era of mechanical efficiency, the unfortunate tendency among some physicians is to hope for an automatic mechanical method that will make the diagnosis without recourse to the standard and proved methods of examination. Dr. H. A. Wilmer's cartoon (Fig. 1) illustrates this point. This shows a physician who is too busy to obtain a history from the patient but who will make a diagnosis on the basis of the electrocardiogram alone—a very dangerous procedure. It is basically unsound and poor medicine for anyone to make clinical diagnoses on the basis of electrocardiograms alone.

"The doctor doesn't have time to take a history but he'll phone you the diagnosis tomorrow."

Fig. 1. A scene that is enacted too often in modern clinical medicine.

It should be remembered that the electrocardiogram is only a *report* of a laboratory procedure, and a very delicate procedure at that. The information derived in this manner should be used to supplement, and should be applied in conjunction with, information obtained from other sources, including (1) a carefully taken history, which is the most important part of the examination of patients who have coronary disease, (2) a thorough physical examination, (3) roentgenologic examination and (4) examination of the patient's blood. It should be realized that although the results of an electrocardiogram may be perfectly normal, the patient may still have very serious cardiac disease. A very important and practical test, and often a neglected one, is the amount of physical effort the heart can stand without the production of symptoms. It often is difficult for the physician to make a correct cardiac diagnosis, even when he utilizes the information gained from all available sources.

From the Division of Medicine, Mayo Clinic, Rochester, Minnesota.

CLINICAL-PATHOLOGICAL CONFERENCE

CHORIOEPITHELIOMA, MIXED MESODERMAL TUMOR, AND LEIOMYOSARCOMA OF THE UTERUS

Three Case Reports

HAROLD H. JOFFE, M.D., PHILIP F. ECKMAN, M.D., and ARTHUR H. WELLS, M.D.
Duluth, Minnesota

DR. A. H. WELLS: We wish to present the case studies of three patients with rare neoplasms of the uterus, with a concise review of each subject.

Chorioepithelioma

DR. P. F. ECKMAN: The patient (No. 34843) aged thirty-one, was admitted on November 10, 1945, in her first trimester of pregnancy, because of bleeding. Her first and second pregnancies in 1937 and 1942, respectively, were uneventful. She was treated with bed rest, sedation and progesterone. The bleeding ceased and she was discharged on November 25, only to be admitted a day later because of a recurrence of painless bleeding. The uterus was found to be firm, about the size of a three to three and one-half month pregnancy. The cervix was firm and closed. She was again treated conservatively, with cessation of bleeding, and discharged on December 3, 1945.

Three days later, on December 6, she was readmitted with bleeding and cramp-like pains. While in the hospital, two masses of placental tissue with grape-like refractile cystic protrusions were passed. Microscopic examination revealed swelling and hydroptic degeneration of the chorionic villi and large areas of necrosis, typical of a hydatidiform mole. There was no evidence of chorioepithelioma. A dilatation and curettage was done, which revealed no evidence of malignancy. The patient was discharged six days later on December 12, 1945.

The Friedman test, using 0.1 c.c. of urine, was positive on two occasions between her last discharge and readmission on January 15, 1946. A total hysterectomy was done on January 16.

Pathological Report

DR. A. H. WELLS: The uterus measured 11 by 7 by 5.5 centimeters. The outer surface was quite smooth, and the walls were slightly thickened. The endometrium was soft, gray and not unusually thick. There was a slight bulging of the endometrium in the fundus which was found to be due to an encapsulated, soft, gray, friable tumor mass in the myometrium, measuring 1 cm. in diameter and about 0.8 cm. below the endometrium (Fig. 1). No other tumor masses were noted, and the cervix was not unusual. Microscopic examination through this tumor nodule revealed large numbers of syncytial and decidual cells, both of which were embryonic in type with hyperchromatic and anaplastic nuclei, typical of a chorioepithelioma (Fig. 2). The lesion appeared to be fairly circumscribed, and no other malignant change was found in other parts of the uterus.

The patient was discharged on January 27. A Friedman test, at six months and at one year later, was negative. The patient, two years after her hysterectomy, is alive and well.

Discussion

DR. R. F. ECKMAN: Chorioepithelioma is a very definite and highly malignant disease entity, but is encountered with great infrequency. How rare it is may be inferred from the fact that during the thirty years following its original description by Stanger as a clinical entity, there were only 571 collected cases in the world literature. By a strange set of circumstances, it has fallen to my lot to attend two such cases. In reporting a case of chorioepithelioma of the uterus, Curtiss stated that he had seen only four other cases of proved chorioepithelioma of the uterus, all of which were studied only from pathologic aspects. In sixteen years of clinical experience he had seen but one case of chorioepithelioma diagnosed during life, although perhaps twenty patients with provisional diagnosis of this condition had been referred to him, in which the diagnosis was not confirmed.

In addition to the case which you have just heard reported, I would like to give briefly a case history of my other patient who was not as fortunate as was the one already described. This was a young woman, aged twenty-three, who was first seen in a rooming house about September 1, 1932, soon after a spontaneous delivery of a normal male baby at term. The delivery had been entirely unattended, and she had had no prenatal care whatever. After expressing the placenta, she was sent to St. Mary's Hospital, where her stay was prolonged to fourteen days because of some low grade fever.

When she presented herself for postpartum examination on October 3, 1932, a presumptive diagnosis of retained placental tissue was made, and she was returned to the hospital and curetted under anesthesia. A cosiderable amount of partially decomposed tissue was removed, which was reported by the pathologist as endometritis with decidua. She left the hospital five days later with the bleeding checked.

From the Department of Pathology, St. Luke's Hospital, Duluth, Minnesota.

She remained quite symptom-free until the first part of January, when bleeding recurred. This was followed by fever, weight loss, and weakness. On pelvic examination the uterus was found to be enlarged and softened. She was readmitted to the hospital. The patient appeared obviously very septic, and a Friedman test was reported as positive. Because of the enlarging uterus, a positive Friedman test, and her septic condition, after consultation it was decided not to invade the uterus for diagnostic or therapeutic reasons at this time. Supportive and expectant treatment consisted of rest, fluids, blood transfusions, et cetera. During the next two months there was only partial abatement of her septic state, and during this time it became evident that the enlarging uterus was not keeping pace with that of a normal pregnancy. A Friedman test was again reported strongly positive. A histologic diagnosis of chorioepithelioma was established on endometrial curettings by the pathologist, Dr. George Berdez, on March 29, 1933. Exploratory operation and total hysterectomy was performed by Dr. W. A. Coventry on April 12. Due to the patient's poor general condition, death ensued within twenty-four hours. Examination of the specimen and autopsy revealed an invasive chorioepithelioma penetrating the uterus and invading the pelvic and iliac veins. Multiple emboli were found in the lungs, along with three metastatic nodules.

A comparative consideration of these two cases is most interesting from several points of view. One case followed labor at term and the other followed a hydatidiform mole. Polloson and Violet, in discussing the 455 cases in the literature in 1913, pointed out that 45 per cent of chorioepithelioma follow hydatid mole, whereas 21 per cent occur following labor at term. Another 30 per cent follow abortions, and 2.5 per cent occur after ectopic gestation. It has also been pointed out in the literature that a period of latency as long as three or four years has occurred following pregnancy.

These two cases illustrate very pointedly the difference in diagnostic approach and resultant handling because of development and better appreciation in the laboratory procedure. The quantitative fractional approach of the Ascheim-Zondek or Friedman test was not thought of in 1932 or 1933 at the time of this first case; in fact the positive Friedman test at that time served only to confuse the diagnosis in our minds by suggesting strongly the presence of another pregnancy as a threatened or probably incomplete septic abortion.

To approach the situation in the second case with the radical surgical procedure that had to be done, in the entire absence of all objective evidence of such a rare condition as chorioepithelioma, other than the evidence offered by a laboratory procedure, required much courage of one's convictions. The perfectly normal-appearing pelvis and uterus found upon opening the abdomen would cause some hesitation in going ahead with a total hysterectomy in this young woman. Only after finding this small malignant tumor entirely within the wall of the uterus did the futility of another diagnostic curettement appear evident, and such a procedure would only have served to confuse diagnosis further and increase indecision. Certainly in such cases, carefully controlled laboratory procedure may offer the only positive clue to the diagnosis and treatment.

DR. H. H. JOFFE: The etiology is obscure,[6,16] and the precursors may be full term pregnancy, abortion or hydatidiform mole,[1,6,10,14,16,20,25,30] as mentioned by Dr. Eckman.

Chorioepithelioma occurs almost entirely during the child-bearing period, in contradistinction to most of the other malignancies of the female genital tract.[6] In combining three series[6,20,30] totaling fifty-six chorioepitheliomas, forty-two (75 per cent) occurred in multiparous, and fourteen (25 per cent) occurred in primiparious women. The age in two series ranged from nineteen to thirty-nine[6] and seventeen to fifty-one[30] years.

To simplify the data on the precursors of chorioepithelioma, we have taken the liberty of combining five series[1,6,20,29,30] totaling 103 cases. In this combined group, sixty-three (61.1 per cent) followed hydatidiform moles; however, five were coexistant with the mole; twenty-three (22.4 per cent) followed abortion; ten (9.7 per cent) followed full term pregnancy, one of which was associated with pregnancy, and in seven (6.7 per cent) the precursor was unknown.

Hertig[14] found the ratio of hydatidiform moles to the number of deliveries to be 1 in 2,000. The ratio of chorioepithelioma to the number of obstetrical and gynecological patients varies with different series. Acosta[1] reports thirty-two cases of chorioepithelioma out of 21,765 obstetrical cases admitted to the Philippine General Hospital at Manila, or a ratio of one for every 680 obstetrical patients. A more detailed analysis revealed one chorioepithelioma for every 9.14 cases of mole, 474.44 cases of abortion and 4,563 cases of labor. Smith,[30] however, reports only fifteen cases out of a total of 117,260 obstetrical and gynecological cases admitted to the Charity Hospital at New Orleans, or a ratio of one chorioepithelioma in every 13,058 obstetrical and gynecological admissions. This closely parallels the report of Schumann[29] in which the ratio of chorioepithelioma in Philadelphia was roughly one to 13,847 pregnancies.

At this hospital over an eleven-year period, out of 12,722 patients delivered, there were eight (0.062 per cent) hydatidiform moles and one (0.0078 per cent) chorioepithelioma.

The early signs and symptoms are not characteristic and frequently resemble those associated with retained placenta, sepsis and involution.[6] The destruction of blood vessel walls by the invading anaplastic trophoblast elements produces the common and initial symptom of vaginal bleeding.[1,10,16,20,30] The bleeding may be irregular, sudden, severe or depleting.[6] In combining three series[6,29,30] totaling fifty-six in number, vaginal bleeding was the initial symptom in fifty (90.9 per cent) of the cases. Rosenbloom[27] reported a case of fatal intra-abdominal hemorrhage as the result of uterine rupture and extrusion of tumor tissue into the peritoneal cavity. Other symptoms and signs, such as nausea,

Fig. 1. Cut surface of chorioepithelioma is seen as a rounded dark lesion located 0.8 cm. below the endometrial surface or free margin.

Fig. 2. Photomicrograph of anaplastic syncitial and Langerhan's cells of chorioepithelioma.

vomiting and enlarged uterus are encountered.[10,20,30] Pain is usually a late manifestation,[6] whereas, cough, chest pain, hemoptysis, headache and blurring of vision are indications of metastasis.[6,16] Bluish nodules in the vagina or vulva which ulcerate or bleed freely should arouse a high degree of suspicion.[16]

The early diagnosis of a hydatidiform mole cannot be overemphasized, but the immediate detection of a chorioepithelioma is of paramount importance. The diagnostic aids at our disposal are dilatation and curettage and the biologic hormone-urine tests. The diagnosis cannot always be established by a dilatation and curettage, because small growths or deep implantation can easily be missed.[16] The presence of anaplasia and invasion of Langhans and syncytial cells is diagnostic.

The urine in cases of hydatidiform mole and chorioepithelioma contains excessive amounts of gonadotrophic hormone which is the basis for the reaction in the biologic tests.[28] The qualitative and quantitative method have been used, however, the latter is a more reliable aid to early diagnosis.[25,28,30] Schoeneck[28] in order to secure normal standards as a basis for a quantitative test used the urine from 149 pregnant women in amounts varying from 0.0125 to 5.0 c.c. and determined the minimum amount necessary at various stages of normal intra-uterine pregnancy which would give a positive Friedman test. To avoid confusion and for practicability, the standards were expressed in terms of the actual amount of urine required and not the widely used terminology of the units of hormone per given amount of urine. In the absence of hyperemesis gravidarum and multiple pregnancy, a positive test was never obtained with amounts smaller than 0.05 c.c. Smith[30] likewise reports that a postive test with less than 0.05 c.c. of urine is indicative of a malignancy.

In one series[6] the average length of time between the occurrence of the precursor and the diagnosis of malignancy was nineteen months. In another series of forty-four collected cases[25] the interval between the passage of a mole and the diagnosis of chorioepithelioma varied from six days to five and one-half years. However, in the same series, in forty (91 per cent) of the cases the diagnosis was established by means of the biological hormone test within twelve months. The importance of monthly or trimonthly tests cannot be overemphasized. A single negative test does not justify its discontinuance.[25]

A positive biologic test for weeks after delivery of a full term pregnancy or following an abortion, or for six weeks or longer following the passage of an hydatidiform mole, is strong evidence of a malignancy.[6,25]

In thirty-six collected cases with recovery, the chorionic hormone test was negative in thirty-four (95 per cent) of the cases in less than three months and in twenty-four (66 per cent) in less than thirty days.[25]

The accepted method of treatment is a panhysterectomy; however, the removal of the primary tumor does not produce reabsorption of the metastases.[1] Dockerty[7] reported a case in which cerebral symptoms were the first indication of metastases, four years after the removal of the primary tumor. In one series,[1] twenty-one of thirty-two cases (62.5 per cent) showed metastases, of which eighteen (56.2 per cent) were to the lungs.

Mixed Mesodermal Tumor

Dr. F. D. Weeks: The patient (No. 41254) was first seen by me in October, 1931, at the age of forty-three because of scanty menstrual periods of several years duration and an associated bearing-down sensation.

Fig. 3. Half of amputated fundus of uterus cut open exposing globular fibrous neoplasm (mixed mesodermal tumor) encased in thinned-out uterine walls.

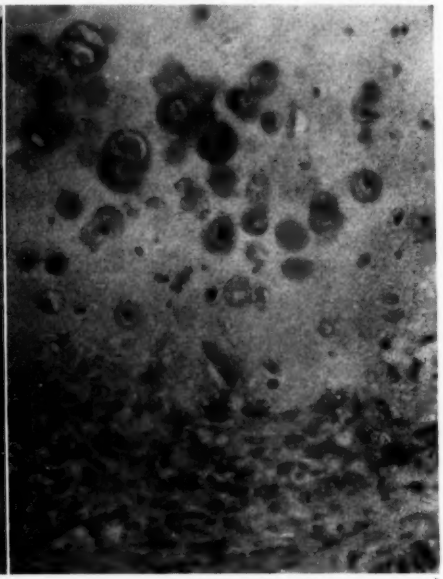

Fig. 4. Photomicrograph of area with cartilage cells and matrix.

Physical examination revealed a moderate degree of arteriosclerosis with a blood pressure of 142/100. A large, tender, irregular shaped uterus was felt. A dilatation and curettage of the uterus was done, followed by the insertion of 50 milligrams of radium for twenty-four hours. A diagnosis of a papillary adenoma was made by the Department of Pathology of the University of Wisconsin.

A re-examination in June, 1932, showed a progression of the hypertension with a blood pressure of 186/118 and cardiac enlargement. There had been no further vaginal bleeding, and a pelvic examination revealed a small uterus with a slight enlargement at the right cornu. The cervix was not unusual. A pelvic examination about six months later, in December, 1932, revealed no change.

The patient was seen on many occasions during the next fifteen years. In October of 1947 she complained of lower abdominal discomfort. The blood pressure was 234/122, with albumin and casts in the urine. Pelvic examination showed no increase in the size of the uterus. She was again seen on December 26, 1947, at the age of fifty-nine because of vaginal bleeding of five days' duration after sixteen years of amenorrhea. Physical examination at this time revealed a blood pressure of 230/120. Urinalysis was essentially negative except for occasional granular casts. The red cell and white cell counts and hemoglobin were within normal limits. The uterus was found to be large, irregular, freely movable, but somewhat tender. There was a soft tumor mass extruding from the opened external os. On December 31, 1947, a supravaginal hysterectomy was performed. The tumor which projected through the external os was easily removed through the supravaginal procedure, leaving normal cervical tissue for closure.

Pathologic Report

Dr. A. H. Wells: The uterus measured 14.1 by 11.6 by 9.5 cm. The myometrium measured 1 cm. in thickness and formed a shell-like capsule incasing the nodular, grayish tumor mass measuring 13 by 10.5 by 8.5 cm. (Fig. 3). There were definite cystic areas in which the cysts measured from 1 mm. up to 0.4 cm. in diameter. Other areas of the tumor had a rather firm grayish homogenous surface. The center was soft and necrotic. Microscopic examination revealed anaplastic smooth muscle, fibrous connective tissue, cartilage (Fig. 4) and striated muscle cells, as well as columnar epithelial lined glands. In many areas there was marked anaplasia and in addition, large areas of necrosis, mitotic figures and tumor giant cells. A diagnosis of mixed mesodermal tumor of the uterus was made. No fallopian tubes or ovaries accompanied the specimen.

Discussion

Dr. H. H. Joffe: These tumors are of mesodermal origin, in contradistinction to the trigerminal teratomas. There is no unanimity as to their histogenesis. Whether they arise from Müllerian cell rests or tissue pulled

down by the Wolffian duct during its embryonic descent, is of academic interest.[12,17,18,22,23] The all-important feature is that these pleuripotential mesenchyme cells have retained their capacity to differentiate into a variety of mesodermal elements which are not normally found in the uterus, such as striated muscle, cartilage, bone myxomatous and sarcomatous tissue, et cetera. The stimulus to neoplasia and growth is unknown but is probably hormonal in nature.[22]

The tumor develops at one of three sites: corpus, cervix or vagina. Glass,[12] in reviewing ninety-four cases in the literature, found the corpus of the uterus as the primary site in 58 (61.7 per cent) and the cervix in thirty-six (38.3 per cent). Practically all of the corporal tumors occur after the menopause.[2,12]

The majority of the cervical tumors appear during active sexual life.[2,12] Amolsch[2] states that all reported cases of vaginal tumors occurred before the age of twenty-two years, with the majority occurring before the age of two years.

The tumors arising in the cervix appear as polyps and those in the corpus as massive intrauterine polypoid growths.[3,12] They are usually composed of a variety of mesodermal elements. Lebowich and Ehrlich[8,17] insist on the presence of embryonal myoblasts or striated muscle tissue in combination with one or more heterologous elements as the histologic criterion. On that basis they only accepted twelve cases as mixed mesodermal tumors in their review of the literature. It does seem unreasonable to exclude the majority of these tumors on such arbitrary histological criteria, since they are a distinct pathologic entity and all follow a rather typical clinical course.[22] Glass,[12] in reviewing ninety-four cases in the literature, found myxomatous tissue in twenty-seven out of thirty-six (75 per cent) tumors involving the cervix and in forty-one out of fifty-eight (70.7 per cent) involving the corpus. Cartilage was noted in 55.6 per cent of cervical, and in 60.3 per cent of corporal tumors. Striated muscle was found in 30.6 per cent of cervical, and in 41.4 per cent of corporal tumors. The stroma was composed of spindle cells in 75 per cent of cervical, and in 94.8 per cent of corporal tumors. Other mesodermal elements present were smooth muscle, bone, fat, round and giant cells in the stroma.

The symptoms and physical findings are essentially the same as with other malignancies of the uterus, namely, vaginal bleeding, saguino-purulent discharge and pressure symptoms if the mass is large or invades surrounding structures.[8,12,17,18,24] The diagnosis rests solely on the heterologous histologic picture and may be confused with a fibromyoma undergoing cartilagenous change or ossification, myosarcoma, rhabdomyoma, teratoma, carcinosarcoma, chondroma, myxochondrosarcoma and myoblastoma.[8] Carcinomatous degeneration is rare, however. Ehrlich[8] reported a case with superimposed adenocarcinoma, bringing the total of reported cases in the literature to fifteen. Glass[12] reported one case with associated fibroids, only eight such cases being previously described.

Local recurrence is almost a constant feature, and metastases to the vagina, bladder, parametria, broad ligaments, peritoneum, pleura, lungs and liver are common.[2,8,12] In a review,[12] metastases occurred in twenty-six out of thirty-six (72.2 per cent) cervical tumors, and in thirty-five out of fifty-eight (60.3 per cent) corporal tumors. Local recurrences occurred in 50 per cent of cervical, and in 27.6 per cent of corporal tumors. Although the lungs and pleurae are frequent distant sites for secondary growths, they rarely reproduce the parent tumor, but instead develop as a spindle cell or myxosarcoma.[12]

These neoplasms are malignant out of all proportions to their histological appearance, with a mortality of about 95 per cent regardless of therapy.[2,3,12,17,24] There are no five-year cures in the literature,[8] and the average duration of life following removal is about one year.[12]

The treatment consists of a panhysterectomy followed by irradiation, but then in view of the high mortality, is only a palliative measure.

Leiomyosarcoma

DR. H. E. BAKKILA: This fifty-eight-year-old housewife (No. 4016) was admitted to the hospital on February 20, 1948, complaining of a gradual increase in the size of the abdomen, an abdominal mass, a sensation of marked pelvic weight and a loss of 20 pounds since November, 1947. There was moderate anorexia, some recent urgency and questionable incontinence of urine. During the month prior to admission, there was increasing dyspnea.

Physical examination revealed a diffuse nontender enlargement of the lower abdomen which was firm and somewhat nodular. There was flatness to percussion, absence of ausculatory sounds, and no shift of the tumor mass with change of position. On pelvic examination the tumor mass was found to fill the entire pelvis with pressure on the uterus, vagina and rectum.

The urinalysis was essentially negative. The hemoglobin was 5.75 grams, with a red cell count of 2,190,000. The blood Kline test was 4-plus. A flat plate of the abdomen on February 21 led to the conclusion of intraperitoneal fluid or an intra-abdominal tumor. A chest film on February 26 was diagnosed metatastic lesions in the left lung.

The patient was prepared for operation with five blood transfusions, and on March 3, 1948, an exploratory laporotomy revealed a huge retroperitoneal mass rising out of the pelvis. A portion of the tumor mass had to be resected in order to close the abdominal wall. During the operation she received 1,000 c.c. of blood, but in spite of this her blood pressure gradually fell, and she expired approximately one hour later.

Pathologic Report

DR. A. H. WELLS: The necropsy revealed a huge nodular tumor mass weighing 6,000 grams, which formed a tight mold of the entire pelvis. The peritoneal cavity contained 2 liters of blood. The tumor mass extended mainly up the left side of the abdominal cavity to the diaphragm and displaced the abdominal viscera to the right. There were only traces of what appeared to be myometrium, visible in the form of strands separated

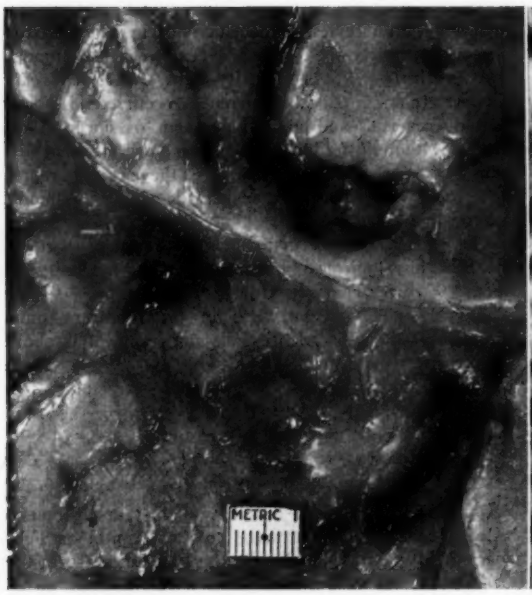

Fig. 5. A portion of cut surface of the leiomyosarcoma.

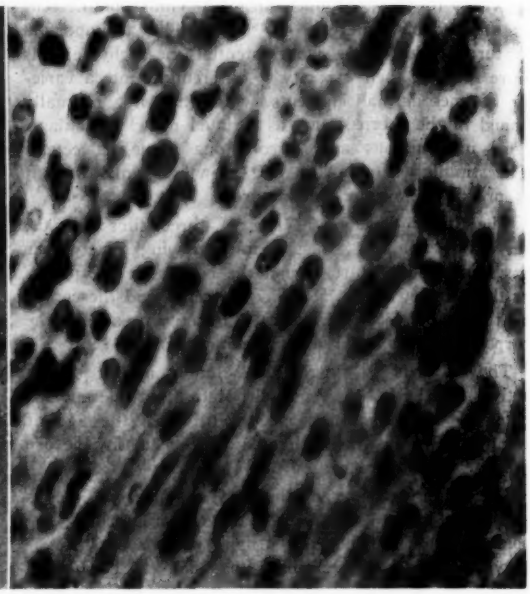

Fig. 6. Photomicrograph with anaplastic spindle cells, mitotic figures and tumor giant cells of leiomyosarcoma.

by tumor tissue. The cervix was not enlarged, and it blended with tumor tissue. Its os had disappeared. On cut section (Fig. 5) the nodules were made up primarily of homogeneous, rather firm, grayish tissue with extensive areas of cystic degeneration and occasional discrete yellow areas of necrosis measuring up to 6 cm. in diameter. Microscopic sections (Fig. 6) revealed a very highly anaplastic cellular growth, made up of elongated narrow nuclei with scanty cytoplasm streaming out at the poles. Where maturation could be found, the cells were typical smooth muscle in origin. Many mitotic figures and tumor giant cells were noted. Both lungs revealed typical metastatic tumor nodules, and both kidneys revealed a Grade I hydroureter and hydronephrosis. There was a Grade II syphilitic aortitis.

A diagnosis of leiomyosarcoma of the uterus with metastases to the lungs was made.

Discussion

DR. H. H. JOFFE: Leiomyosarcomas may originate in any part of the uterine wall, in the endometrium, adjacent connective tissue or in a leiomyoma, but they are commonly of myometrial origin.[4,5,24]

There is a diversity of opinion as to whether these tumors are malignant from their onset or whether the malignant change occurs in an originally benign tumor.[4,5,10,21,24]

Kimbrough[15] in reviewing 3,388 uteri removed for myomata found a total of forty-three (1.27 per cent) sarcomas, of which twenty-six (0.76 per cent) had developed in pre-existing leiomyomata and seventeen (0.51 per cent) were primary. Randall[26] found thirty-nine sarcomas against 3,686 leiomyomas and 577 carcinomas of the uterus. Of the thirty-nine sarcomas, twelve (0.32 per cent) were associated with myomas, and twenty-seven (0.73 per cent) occurred in uteri showing no leiomyomata. The ratio of leiomyosarcoma to carcinoma was one to 15.6, and one to ninety-six for leiomyomata. Other reports place the ratio of leiomyosarcoma to carcinoma as one to forty-three[32] and one to fifty.[5] Novak,[24] in reviewing 26,973 case specimens of uteri, found 6,981 (25.9 per cent) leiomyomata, 241 (0.89 per cent) adenocarcinomas of the fundus, 1022 (3.8 per cent) carcinomas of the cervix, and 59 (0.22 per cent) sarcomas. The incidence of sarcomatous change occurring in myomas was 0.56 per cent. Other series show a higher incidence of sarcomatous change in pre-existing leiomyoma, varying from 1.35[33] up to 4.8[11] per cent. A fair average would probably fall between 0.5 to 1.5 per cent.[4,21,24]

During the eleven-year period from 1937 through 1947, 816 uteri were removed at St. Luke's Hospital for leiomyomata. In this group, three (0.36 per cent) were sarcomatous. Although this series is too small to draw any definite conclusions, the incidence at this hospital closely parallels the figures reported in some of the larger series.

The majority of these tumors occur at menopause with the highest incidence during the fifth decade of life.[10,11,15,24,31]

Mural sarcoma may arise as a nodular and fairly circumscribed tumor,[24] and since they vary greatly in their appearance, it is difficult to recognize them.[11,24] However, because of the frequency of leiomyomata uteri, there is a tendency on the part of surgeons to

be careless in their examination at the time of surgery.[31]

The more frequent occurrence of corporal than cervical leiomyoma explains in part at least, the predelection of sarcoma for the corpus of the uterus.[24]

The sarcomatous changes occur most frequently near the center of the myoma, giving it a raw pork or brain-like appearance instead of the glistening whorl like nature of a myoma.[24,32] Wheelock[33] states that the following findings at the time of surgery should arouse suspicion of a sarcoma in a leiomyoma:

1. Unusual friability of the broad ligament.
2. Unusual vascularity of the tumor.
3. The absence of a sharp line of demarcation between the tumor and the myometrium.
4. The opaque pork or brain-like appearance instead of the usual glistening whorl-like appearance.

The microscopic picture is characteristic of sarcomas, that is, highly cellular with wide variations in the predominate type of cell present, which may be round, spindle, mixed or giant cells.[11,21,24] Many observers feel that there is a direct correlation between the number of mitotic figures and the degree of clinical malignancy.[4,9,15,24]

Th clinical symptoms are not distinctive and resemble ordinary leiomyomata, so that most of the cases are not diagnosed until examined pathologically.[9,21,24] In a review of forty-three cases at the Lahey Clinic,[31] the chief complaints were: altered menses in twenty-one (49 per cent), pelvic pain and enlarging abdomen in nine each (21 per cent), urinary frequency in eight (19 per cent), and vaginal discharge in two (5 per cent) of cases. Abnormal bleeding may be entirely absent, especially if the endometrium is not involved. The vaginal discharge, early, is thin and watery; later it becomes serosanguinous and foul. Pain is a late manifestation of infiltration into adjacent tissue.[24]

The total five-year salvage in forty-three sarcomas at the University of Pennsylvania Hospital[15] was 34.3 per cent, as compared to 28.5 per cent in another series.[31] Novak[24] followed fifty out of fifty-nine cases and found fifteen (30 per cent) living at the end of fifteen years, and twelve (24 per cent) at the end of ten years. Kimbrough[15] found that the percentage of five-year cures were: (1) three times as great in sarcomatous degeneration of a myoma than in a primary sarcoma, (2) three times greater in the younger women as compared to those operated on after menopause, (3) four times greater in those tumors showing a low mitotic count, with recurrences, two times as frequent in the group showing a large number of mitotic figures.

Metastasis to distant organs, although not too frequent, do occur.[10,13] However, metastasis to bone is extremely rare, with Brooke[4] reporting the fourth such case.

Panhysterectomy with bilateral salpingo-oophorectomy, followed by deep x-ray therapy, is the accepted form of treatment.

Summary

We have presented a case study of each rare neoplasm of the uterus—(1) chorioepithelioma, (2) mixed mesodermal sarcoma, and (3) leiomyosarcoma— and have given a brief review of the literature on each subject.

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History of Medicine In Minnesota

A HISTORY OF MEDICINE IN SCOTT AND CARVER COUNTIES

Biographical Dictionary

(Continued from June issue.)

George F. Mish was a physician and surgeon who settled in Belle Plaine, Scott County, in the year 1858. He remained but a short time.

L. Gilbert Mitchell settled in Carver County about 1886. He lived first in Waconia, then moved to Jordan, Scott County, in 1890. He was well liked there and gained an extensive practice in Jordan and the vicinity. During this time he made connections in Shakopee, and in 1893 he located there to take Dr. Entrup's place after the latter's death. He remained there for several years, then moved to Mound. During his stay in this territory, he acted in the capacity of health officer of Waconia during a dangerous scarlet fever epidemic in 1887, and also served as treasurer of the pension examining board at Shakopee. He was the son of Dr. S. H. Mitchell of Minneapolis.

Gerald R. Moloney was born in 1847 in Ireland, where he attended the national schools and completed his course of studies in Dublin. In December, 1872, he arrived at Belle Plaine, Scott County, and early the next year he went to Minneapolis. There he studied medicine under Dr. Hutchinson until the following autumn, when he attended lectures at Bellevue Hospital Medical College, New York City. The next summer he studied in Saint Paul under Dr. C. E. Smith, and in the fall returned again to New York, graduating in February, 1875, from the Medical Department of the University of the City of New York. He was a successful competitor in an examination at St. Vincent's Hospital of New York and was duly appointed assistant house surgeon. In the fall of 1875 he opened an office at Belle Plaine, Scott County, where he remained for more than fifty years and where in 1877, he opened a drug store. He had a very extensive practice and became one of the prominent businessmen of the town as well as one of the county's leading physicians. One of his first services in public office was in the capacity of superintendent of schools in Belle Plaine. For many years he served on the pension examining board at Shakopee, serving as president for the year 1883 to 1884. He was succeeded by Dr. Hartley in 1897. In the year 1900, Dr. Moloney and G. A. DuToit of Chaska purchased all the stock in the State Bank of Belle Plaine and Dr. Moloney was made vice president. He continued to practice medicine at Belle Plaine until his death, on July 18, 1927, in an automobile accident.

L. B. Morrow came to Shakopee to practice medicine in 1867. He was at first a partner of Dr. Rouse. After a few months Dr. Rouse moved into the house formerly occupied by Dr. Risley and had his office there. Dr. Morrow had taken over the New Drug Store, which he operated for a short time in

connection with his practice. He remained in Shakopee for several years. At one time he practiced in Hudson, Wisconsin, and also in Saint Paul. He died in Saint Paul.

J. F. Mulholland came to Jordan, Scott County, in 1881 and was, for the first two months of his residence, a partner of Dr. Walter of that town. Dr. Mulholland was a graduate of the Chicago Medical College in 1879 and was an intern in the Mercy Hospital of Chicago. Not long after his arrival in Jordan there was a severe scourge of diphtheria in the county and he and Dr. Walter were kept busy attending the sick. In February, 1882, he was appointed surgeon for that division by the Minneapolis and St. Louis Railway Company. He was active in local affairs to the extent of speaking before such organizations as the Literary Society and the Teachers Association. In 1895 he was appointed to the pension examining board in Shakopee. He died in Jordan on August 23, 1919.

Andrew Naegeli was graduated from the Medical College of Indiana in 1885 and he settled in Chaska in 1886. His card announced, "Night and day calls in the city or country promptly attended to," and he built up a good practice after a short time. In 1890 he moved to Minneapolis to take the place of Dr. Hefti. After a year's stay there, he went to St. Cloud, but in 1898 he again came into the Minnesota Valley region and located at Hutchinson.

S. J. Northrop came to Jordan, Scott County, about 1870 from which place he had a wide practice in both Scott and Carver Counties. About 1882 he moved to Norwood, Carver County. At that time he met a considerable amount of disfavor by putting his mother in the St. Peter Asylum. He continued to practice in Carver County for a number of years. He probably was not a graduate of a medical school, inasmuch as he practiced under the exemption law of 1883.

Edward E. Novak was born at Danforth, Johnson County, Iowa, on April 29, 1873. He was educated in the rural schools of Johnson County and attended the Iowa City Academy from 1888 to 1892. He was graduated from the Medical Department of the State University of Iowa in 1895.

After his graduation he located in New Prague where he has continued in practice to the present time, with the exception of two six-month leaves (1912 and 1932) when he visited European clinics. He is a member of the Scott-Carver County Medical Society and the Minnesota State and American Medical Associations.

Always interested in rural education problems, he has served on the New Prague School Board for over thirty years. He was president of the Minnesota State School Board Association from 1937 to 1938 and he is now a member of the Board of Regents of the University of Minnesota. In recent years he has served as Minnesota state senator from his district.

Gottlieb Oppliger settled in Waconia in 1899. Before 1909 he was in Baudette, Minnesota.

George H. Overholt, a graduate of the Albany Medical College, New York, in 1866, located at Shakopee, Scott County, in January, 1871. His card announced him as "Physician, Surgeon, and Obstetrician." After practicing at

Shakopee for two years or more, he moved to St. James, where he lived for many years and operated a drug store. He was licensed to practice in Minnesota in 1887.

E. J. Palmer, a graduate of the University of Pennsylvania, came to Chaska in 1869 and at that time said that he had spent thirty-one years in the practice of his profession. He remained only a year, returning then to his old home in Georgia.

John S. Pashley located in Belle Plaine, Scott County, about 1866. He practiced there until his death in 1876.

W. H. Phillips was a graduate in medicine from the University of Minnesota in 1894. He came to Jordan to practice about 1896 and remained in the county many years. He served as county physician in 1897.

William Ray was a graduate of the Missouri Medical College in 1868, who came from St. Louis to Chaska in that year and remained in practice there about five months. For a short time he practiced in Saint Paul, and in September, 1868, he moved to Glasgow, Missouri, a larger field for practice.

H. W. Reiter was graduated from the Medical Department of the University of Minnesota in 1893. Practicing first in Kerkhoven, Swift County, he settled in Shakopee in 1897 and soon had a good practice. He was very often summoned to attend accident cases. In 1898 he was appointed official surgeon of the Omaha Railway at Shakopee, a position which he has held for many years. On the departure of Dr. C. W. Malchow in 1900, Dr. Reiter purchased the former's practice, office equipment, horses and vehicles. He had a heavy practice which kept him busy, and he retained his prominent position. In 1910 he became United States pension examiner at Shakopee and served as secretary of the board. In 1914 he took office as coroner of Scott County; he served on the school board four terms. Dr. Reiter joined the Scott and Carver County Medical Society when it was first organized, and he held the secretaryship from 1904 to 1929.

Dr. Rueten was a practicing physician at Cologne in 1886.

J. S. Richardson (or J. L. Richardson) came to Chaska from Rockford, Wright County, in 1870. His professional card read:

> Dr. J. S. Richardson
> eclectic
> Physician and Surgeon
> Chaska Minn.
> Office opposite the Court House. Offers his services to the surrounding country and is prepared to treat thoroughly all chronic cases. Especially liver and lung diseases.

He remained in Chaska for several years. Later he may have moved to Norwood, where a doctor was much needed. After 1883 he practiced under an exemption certificate. It appears that by 1890 he was in Perham, Otter Tail County.

C. W. Riches practiced medicine in Waconia in 1886 and later. In 1883, when he was living in Young America, he received an exemption certificate under the Minnesota "Diploma Law" of that year.

Frederic N. Ripley, the first physician in Scott County, arrived in Shakopee in the winter of 1852-1853 and in that season entered business and practiced medicine. Although he failed in trade, he continued practicing medicine there. Later in the year 1855 he moved to a townsite belonging to him near the source of the Crow River (now the town of Litchfield), where he camped all winter. When in March he attempted to come out for supplies, he lost his way and was frozen to death. At that time he was about twenty-eight years of age, and was county commissioner of the new county of Meeker. He had intended to make Cedar City his home and was one of the principal proprietors of that town. Dr. Ripley was a native of New York.

A. O. Risley came to Shakopee in 1855 and practiced there for ten years or more. He was a member of the North Western Pioneer Company and he made many trips around the territory procuring and surveying town sites. In 1857 he married Miss S. J. Coulthard of Shakopee. He was one of the few physicians in the vicinity at that time and consequently was kept busy day and night when any sickness came to the community.

Theobold Roehrig was a German physician who settled in Shakopee in 1868. The notice of his coming inserted in the paper announced that he was a graduate of the "highest Medical University of Germany," and that he brought with him the advantages of many years of successful practice. He remained three years or more.

Corydon Eugene Rogers was graduated from the medical department of the University of New York City in 1868. He opened an office in Carver in April, 1868, and soon had a good practice. For several years he was postmaster at Carver. In 1869 he married Miss Mary Pamelia of Troy, New York. In January, 1870, he was appointed first county physician of Carver County. He resigned the position in August of that year when he decided to move to Thompson, on the line of the Superior Railroad, in Carlton County. He was elected register of deeds for that county, but continued to practice medicine. Four years later he went to Minneapolis where he engaged in the insurance and real estate business. In Minneapolis on November 10, 1883, he received his license to practice medicine.

William Rottmann was graduated from the University of Zurich, Switzerland, in 1874; he came to Jordan, Scott County, from Arlington in September, 1883. His card read:

Dr. Wm. Rottmann
Physician & Surgeon
(Deutscher Arzt)
Graduated in Zurich, 1874
Jordan, Minn.

He received his license to practice medicine in Minnesota on March 3, 1884. After a year or two he moved to Young America and then returned to Jordan about 1888. In May, 1889, he again changed his place of residence

and moved to Minneapolis. He was considered a skillful physician. In September, 1889, he died at Minneapolis.

Dr. Rouse settled in Shakopee about 1858. He practiced medicine there for ten years or more. In 1867 he took in Dr. Morrow as a partner.

B. Rudorf was a practicing physician in Young America in 1875.

Jacob Ryder settled in Cologne, Carver County, about 1884. He was interested in real estate and for that reason he moved to Saint Paul in 1887. In 1890 he lived in Albany, Stearns County, and late in that year he returned to Cologne. He was considered an able physician. After 1883 he practiced under Exemption Certificate No. 417-3.

Alfred A. Sabin established himself in Shakopee in 1883. He and his wife were active in social affairs and he had a good practice. He started the manufacture of a patent medicine and in 1885 the demand for it had reached large proportions. In 1886 he moved to Le Sueur, where he remained until 1892, returning at that time to Shakopee to take Dr. J. B. Dunn's place. In 1894 he was appointed city health officer, and the next year he was elected to the pension examining board at Shakopee. He had a wide acquaintance in both Carver and Scott Counties and practiced in both. He died at Shakopee after a seige of muscular rheumatism in February, 1896, at the age of forty years. He was a native of Indiana and had spent his boyhood in Michigan, moving to Minnesota in 1879. He received his medical education at the University of Minnesota, from which he was graduated in 1892.

Mrs. Catherine Salden was a practicing physician who claimed to have been licensed by the United States Government. She spent a brief time in Chaska in 1870.

Dr. Salisbury was the first physician in the township of St. Lawrence, Scott County. He came there in 1859 and remained but a short time. A schoolhouse was built in 1859 and Dr. Salisbury taught the first school held there.

M. Schober came to Chaska from La Crosse in February, 1899. He had been a member of a medical society in Wisconsin. His professional card entered in the *Valley Herald* read as follows:

Dr. M. Schober
of the University of Berlin
Physician and Surgeon
Special attention given to all surgical
diseases and diseases of the eye.
Office Starken Building

He was a skillful and popular surgeon who endeavored to interest the citizens of Chaska in a project he had for the equipping of a first-class hospital in the city. In June, 1900, he had succeeded in securing the co-operation of the Franciscan Brotherhood of Chaska and the surrounding stations, and was awaiting the sanction of Archbishop Ireland for the venture. There was no hospital in either Scott or Carver County at that time.

Edward A. Shannon was graduated from the Saint Paul Medical College in 1886. In 1888 he established his residence at Watertown, Carver County, where he served as coroner in 1891 and 1892. He moved away from the county in 1892, later locating at Buffalo, Wright County.

Peter F. Shillock was born in New Ulm, Minnesota, in 1858. He was graduated from the medical department of the University of New York City in 1882, ranking second in a class of two hundred. When he received his Minnesota license on November 23, 1883, he was living in Hastings. Later he began practicing in Chaska and became well known through Carver County. After three or more years of practice there, he moved to Horicon, Wisconsin. Later he returned to Hastings. He died in Hastings of apoplexy in November, 1888, at the age of thirty.

E. E. Shrader (or Shroeder), who was graduated from Jefferson Medical College in 1893, located at Watertown, Carver County, about 1895. He soon had a very good practice there which drew from the towns of that vicinity.

J. D. Simpson, a graduate of the Medical College of Chicago in 1881, came to Shakopee early in that year. In May of the same year he moved to Henderson, Nicollet County. Soon after that he married Miss Sarah Lord of Shakopee. Dr. Simpson spent the year 1893 in New York and the following year in study in the hospitals of England where he specialized in diseases of the eye. In July, 1894, he settled in Minneapolis, where he practiced for a number of years, although he continued to keep up his contacts with the people of Shakopee.

Herbert O. Smith was a homeopathic physician who was graduated from Hahnemann Medical College, Chicago, in 1881. Before coming to Shakopee in June, 1881, he spent some time as a student of Dr. John A. Steel of Minneapolis. His card read:

H. O. Smith, M.D.
Physician & Surgeon
Shakopee, Minnesota
All cases of Surgery or General Practice in town or country attended promptly. Office over McMullen's store. Residence 1st door east of Occidental hotel.
Office hours 10 to 12 a.m.
2 to 4 p.m.
7 to 8 p.m.

He soon became one of the best known and busiest doctors in the county. He had a famous team of horses which brought him to each call in the minimum of time. Evidently he prospered; his home was spoken of as one of the most imposing in town and it was constantly being improved. He took frequent trips to Minneapolis and Saint Paul and had many house guests. Dr. and Mrs. Smith were very active in organizational work. The doctor was interested in the Shakopee Equitable Aid Union and held many offices in that society; he also held offices in the E.A.U., in the King Solomon Lodge No. 44, A. F. & A. M., in the A.O.U.W., in the Children's Home Society, the St. John's chapter of the Royal Arch Masons, and the Masonic Auxiliary in Shakopee. For several years he served as city health officer in Shakopee, also as county physician, and was for many years a member of the pension

examining board. He also took an active interest in the schools and in the building of the new Presbyterian church in 1900.

John Elfred Soper, who was graduated from the University of Minnesota Medical School in 1894, came to Norwood, Carver County, in January, 1899, after the death of Dr. Koch of Norwood. He had previously practiced at Delano.

Dr. Southworth came to Belle Plaine in the middle fifties. In 1861 he was elected a director of the Scott County Agricultural Society.

Hugo Speier, who had been educated in medicine in Berlin, Germany, settled in Belle Plaine about 1883 and married there. He was licensed to **practice medicine in Minnesota** on December 31, 1883, and was graduated from the College of Medicine of the University of Minnesota in May, 1884. In July, 1884, he settled in Jordan, where he shared offices with Dr. Walter. His professional card read:

Dr. H. Speier
Physician & Surgeon
(Deutscher Arzt)
Office with Dr. Walter
Residence in F. Nicolin's building, at south
end of stone bridge.
Jordan, Minn.

Beginning in February, 1901, Dr. Speier was in Rochester, Minnesota, about ten years. He came to Rochester from Janesville, Wisconsin, with a record of having practiced medicine in Duluth some fourteen years and in Janesville four years.

C. S. Stoddard started the practice of his profession at Shakopee in 1874. During his stay of five years in Shakopee he held offices in the Lodge of Good Templars at Shakopee, and in the Grand Army of the Republic of Minnesota. In 1875 he was appointed United States examining surgeon for pensioners of Scott County. In 1879 he moved to California where he practiced for many years. In 1900, while in Santa Barbara, California, he wrote a series of articles called "Looking Backward" which told of his experiences in Shakopee during the seventies. These were published in the *Scott County Argus* in that year.

W. Strickland came from Shell Rock, Iowa, to Jordan, Scott County, in July, 1879. He decided not to stay and left in search of a new location in August of that year.

F. H. Stuart opened an office in Shakopee for the practice of metlicine and surgery in October, 1879. He worked up a fine practice, then suddenly left. He next settled at Ada, Kittson County, where he became notorious, first leaving under a cloud, then returning, only to disgrace himself by killing another physician in a fight in 1885.

L. S. Thompson located in Shakopee in March, 1874. In his card he referred by request to Drs. Murphy, Hagan, Richeson and Stone of Saint Paul. He arrived soon after Dr. Stoddard and proved an energetic rival. In April he was selected by the pension department to fill the vacancy made by the death of Dr. Wakefield as United States examining surgeon for Scott County.

After remaining about one year in Shakopee, he moved to Honolulu where he engaged in raising sugar cane.

E. L. Thorp, "physician, surgeon, and accoucheur," located at Jordan in March, 1879, but departed in a few months to practice medicine at Shell Rock., Iowa.

C. F. Tuomy, who received his degree of doctor of medicine from the University of Michigan in 1896, arrived in Chaska in January, 1897, and soon came to the front as a successful practitioner. In April, 1898, he was elected to serve for three years on the Chaska board of health. In September of that year he was elected to fill the position of assistant physician at the state hospital at St. Peter.

Dirk Van Krevelin came from Hokah, Houston County, to Belle Plaine in 1879. He announced that he had had a large experience in the tropics and malarial districts, on shipboard, and in marine and naval hospitals. In 1880 he served as coroner of Scott County. He was considered both honest and genial and he had a good following. In 1888 he bought the store of R. Zeglin, a well known merchant at Hollywood, a town near New Germany, Carver County. It was a general merchandise store, and the doctor added a hardware store to it. The next year he sold out at cost, having decided to give up the merchandising business. He then settled at Waconia, where he practiced medicine until 1897 when he moved with his family to Silver Lake, McLeod County.*

Dr. Van Pol practiced near Benton, Carver County, about 1886. He died in 1888 and was buried from the Catholic church at Cologne.

A. Wagner was graduated from the University of Berlin (University of King Frederick Wilhelm) in 1873. He was a specialist in diseases of women. In June, 1887, he came from Joliet, Illinois, where he was physician for St. Joseph Hospital, to locate at Waconia. He was successful there and in the nearby towns. In November of that year he moved to Chaska. Three months later, he moved to Saint Paul where he was associated with Dr. A. J. Stone in the Saint Paul Medical College.

John L. Wakefield was born in Winsted, Connecticut, in 1823. He was graduated at Yale College in 1847 and commenced the practice of medicine under the direction of his father at Winsted. He came to Shakopee in the spring of 1854, and practiced there until his death in 1874, at the age of fifty-one years.

In 1862, at the time of the Indian outbreak, Dr. Wakefield was physician to the Yellow Medicine Indian Agency. The doctor escaped, but members of his family were captured by the Indians and held for six weeks until recaptured by the troops. Dr. Wakefield became postmaster in Shakopee in 1869. At the time of his death he had a very extensive practice and was one of the prominent citizens of that vicinity.

A. B. Walter was among those who made claims in 1854 in Belle Plaine, although he did not reside in that village or practice medicine there until 1860. After five or six years in Belle Plaine, he sold his claim and moved to Jordan, also in Scott County.

Dr. Walter was one of the best and most popular physicians in the county.

*See Notes on History of Medicine in Houston County.

About 1879 he and Dr. F. W. Cram formed a co-partnership, and the two physicians paid daily visits to Belle Plaine, and attended many patients in the country as well. In 1881 Dr. Cram departed, and Dr. Walter continued to practice in Jordan until 1887, when he moved to Minneapolis. In the winter of 1888-1889, Dr. and Mrs. Walter lived in Shakopee with their daughter, Mrs. Southworth. The Scott County Medical Society was formed about that time (1887) and Dr. Walter became a member. He next moved to Princeton, Minnesota, where he remained until 1897. At that time he and Mrs. Walter moved to Sheldon, Iowa, to live with their son-in-law, Dr. F. W. Cram and his two children. Dr. Walter died there at the age of eighty years in 1898.

Josiah S. Weiser, of German descent, was a native of Berks county, Pennsylvania. He came with his parents and two brothers to Minnesota in 1853. His father died from cholera on the Mississippi River boat on which they finished the journey, and was buried at Saint Paul.

Dr. Weiser settled in Shakopee about June, 1855, and his professional card appeared in the first issue of the *Shakopee Independent.* In April, 1856, he entered into a co-partnership with Dr. C. L. Davenport. This was dissolved by mutual consent a few months later. In 1859, when Dr. Weiser became the partner of David L. How, druggist and chemist, he continued to attend to the practice of medicine and surgery. He was interested in public affairs and often took part in debates and discussions. Dr. Weiser was well liked and respected by the settlers in Shakopee; in 1858 he was elected mayor of the city.

In 1862 when he received appointment as Surgeon to the First Regiment of Mounted Rangers under Colonel McPhail, the women of Shakopee made him a present of a sword and a belt. It was in the outbreak of the Sioux during the next year that he met his death at the age of thirty years. An account of his heroism may be found in the records of the Sioux outbreak. Suffice it to say he is ranked among the heroes of pioneer days who were members of the medical profession. Ten miles north of Tappan, Minnesota, there is today a gray granite marker bearing the legend:

Sibley Trail
Dr. J. S. Weiser Shot Here
By Indians
July 24, 1863

K. B. Wilkinson was a physician and surgeon who located at Jordan in August, 1876. His stay was of short duration.

Phillip M. Williams was a physician and surgeon who located at Belle Plaine in March, 1858. The following quotation from the *Belle Plaine Enquirer* for May 13, 1858, is not too flowery to indicate the place Dr. Williams held in the community:

> Our Citizens are sorry to learn that Doct. Williams leaves Belle Plaine for another field of professional practice. It was not indeed expected that a physician of his acquirement and thorough training could long be retained in a comparatively new region when there were so many larger and more congenial fields for the display of medical skill in the older cities of the country.
>
> Dr. Williams had been in Belle Plaine less than one year and yet he had acquired a widely extended business and to our knowledge had also given the highest satisfaction.
>
> Equally popular and respected in social as in professional life is Doct. Williams, for our friend is a gentleman as are all the Virginians in Belle Plaine.

President's Letter

THE BROOKINGS REPORT

One of the most significant books to be published recently—and one which will certainly come as "good news" to physicians—is a small volume entitled "The Issue of Compulsory Health Insurance." This book, an impartial and unemotional presentation of *facts,* not propaganda, is the work of a research agency famous for its work in the social sciences, the Brookings Institution of Washington, D. C.

Every physician will want to read this book, for its contents are indeed heartening—as well as enlightening. In fact, every thinking American should become familiar with it. It is a very unimposing volume, bound in a modest blue cover, but in its pages are some of the most cogent arguments in behalf of the voluntary system of providing for medical care yet to be advanced.

The evidence against compulsory health insurance is conclusive. In the opinion of the Brookings experts, it would be unwise to legislate, in place of the present system, a federalized medical care plan. Such a plan, they hold, would be distinctly detrimental to medical progress.

The Brookings report is the work of two of the Institution's senior staff members, Drs. Lewis Meriam and George W. Bachman, both of whom are familiar with government service, medical research and public health. They have examined all of the literature in the field and have carefully evaluated all of the evidence; the result proves definitely that traditional American methods are superior to foreign ideologies.

All things considered—American death rate, life expectancy, medical costs, capacity to pay, and all the rest of the factors that must be fitted into the American health picture—the Brookings report concludes that the present system is basically sound. Certain arguments often used in support of compulsory measures are effectively refuted, for example, the "draft statistics." It is shown that the so-called draft statistics are unreliable as a measure of the health of this nation and cannot be used to show medical needs.

Another striking point made by the Brookings report is one which physicians have argued for some time: that people won't be any more able to pay a health tax than they are able to budget for medical bills on a voluntary basis. It is also pointed out that there aren't enough facilities, trained workers and qualified professionals to carry out a compulsory health program should one be instituted.

The Brookings report has been made upon request of Senator H. Alexander Smith, chairman of the subcommittee on health of the Senate Committee on Labor and Public Welfare, which is charged with the duty of evaluating proposed federal health legislation. Senator Smith asked specifically that the Brookings Institution evaluate the relative merits of two bills which have been pending before the Eightieth Congress, S. 1320 (paralleling the Wagner-Murray-Dingell Bills) and S. 545, the Taft-Smith-Ball-Donnell Bill.

The proposal labelled S. 1320, which is in essence a bill to create an over-all federal health plan, is not recommended by the Brookings report. The report favors, rather, the other measure, which would provide federal grants-in-aid to states so that each individual state could develop its own plan adapted to fit local needs.

The fact that the Brookings Institution is recognized as a thoroughly independent organization only serves to increase the indebtedness of the medical profession to it for the excellence of this objective piece of work. It should spur the effort of physicians everywhere to fight even more vigorously for what we *believe* is right and what has been *proved* to be the better course.

A. E. Caudle

President, Minnesota State Medical Association

Editorial

CARL B. DRAKE, M.D., *Editor;* GEORGE EARL, M.D., HENRY L. ULRICH, M.D., *Associate Editors*

THE STATE MEDICAL MEETING, 1948

THE ninety-fifth annual meeting of the Minnesota State Medical Association which was held in Minneapolis, June 6-9, was the largest in registration in history. Some 1,989 physicians, 768 nurses, 525 exhibitors, 349 Woman's Auxiliary members, and 609 guests attended. The 1949 meeting will be held in Saint Paul.

The following officers for 1949 were elected:

President-elect: Ernest M. Hammes, M.D., Saint Paul (takes office as president, January 1, 1949)
First Vice President: C. E. Proshek, M.D., Minneapolis
Second Vice President: A. E. Sohmer, M.D., Manakto
Secretary: B. B. Souster, M.D., Saint Paul (re-elected)
Treasurer: W. H. Condit, M.D., Minneapolis (re-elected)
Speaker of the House of Delegates: Charles G. Sheppard, M.D., Hutchinson (re-elected)
Vice Speaker of House: Haddon M. Carryer, M.D., Rochester (re-elected)
Councilors:
Fifth District: Justus Ohage, M.D., Saint Paul (to replace Dr. E. M. Hammes)
Fourth District: H. J. Nilson, North Mankato (succeeding Dr. Sohmer)
Sixth District: O. J. Campbell, M.D., Minneapolis (re-elected)
Eighth District: W. L. Burnap, M.D., Fergus Falls (re-elected)

Delegates to the American Medical Association:
J. A. Bargen, M.D., Rochester (succeeding Dr. A. W. Adson)
W. A. Coventry, M.D., Duluth (re-elected)

Alternate delegate to the American Medical Association:
J. C. Hultkrans, M.D., Minneapolis (re-elected)
W. L. Burnap, M.D., Fergus Falls (re-elected)

On Sunday afternoon, Dr. Ludwig L. Sogge of Windom received a special citation presented by the Council of the Association for services to his colleagues and the people of the state.

Dr. Alfred W. Adson of Rochester presented the citation which read in part:

. . . we all commend you for your extraordinary service . . . your high ideals, your understanding of human nature, your honest, frugality, loyalty and patience. . . . It is known that you at personal sacrifice have given much of your time during the past twenty-three years in directing the activities of the committee on public policy and entitle you to some relief of that responsibility and to the honorable position of counselor to that committee.

Dr. A. J. Chesley, Secretary and Executive Officer of the Minnesota State Department of Health, was honored for his nearly fifty years of outstanding service in public health work in the United States (and abroad) by being selected as the recipient of the 1948 Distinguished Service Award of the MSMA. Presentation of the medal, a complete surprise to Dr. Chesley, took place at the annual banquet on Tuesday night.

Dr. Leonard S. Arling, of Minneapolis, received the annual medal for the best scientific exhibit by an individual physician presented by the Southern Minnesota Medical Association for his exhibit 'What Is Industrial Medicine" Judges who made the selection were: Ernest M. Hammes, Saint Paul; Harold L. Gainey, Kansas City, Kansas; and Sanford S. Sisson, Jacksonville, Florida.

Four members from the list of thirteen eligible to receive certificates citing them for having completed fifty years of practice which entitles them to membership in the Fifty Club were present at the banquet. They were: Dr. Gerhard A. Dahle, Mankato; Dr. Alex E. Hedback and John R. Petersen, Minneapolis; and Dr. William F. C. Heise, Winona. Those unable to attend the banquent were: Drs. Aloysius S. Fleming, Carl J. Lind and N. H. Sheldrup, Minneapolis; Drs. Frank E. Burch, James S. Gilfillan and Asa M. Johnson, Saint Paul; Dr. Leon A. Williams, Slayton; Dr. Joseph G. Parsons, Crookston; and Dr. William B. Torgerson, Oklee.

The Council made the following statement in regard to rebates:

The Council hereby declares itself as unalterably opposed to all forms of rebates and declares the acceptance

of such as an unethical practice and grounds for disciplinary action by the county societies.

It is recommended that any practice which might give rise to public suspicion that a business arrangement exists between a commercial house and a physician be discontinued.

The Council assures the House of Delegates that it is fully aware of the serious damage to our public relations which has occurred due to the publicity given the government action against the members of our Association.

The Council is alerted and will inform the county societies when it is timely to implement the above suggested action.

Among the numerous matters acted upon by the House of Delegates at the meeting, the following deserve special mention:

Approval of a special assessment of $10.00 on each member starting January 1, 1949, to implement the present public relations program of the State Association.

Reaffirmation of its support of enabling legislation for establishment of county and multiple County Public Health Units and instruction of the Committee on Public Policy to actively support such legislation next year.

After hearing considerable discussion, during which the opposition to the resolution approved by the House last year for having the laboratory of the State Department of Health carry on Rh typing service for physicians of the State was led by members of the Minnesota Society of Clinical Pathologists, the House of Delegates approved a resolution to rescind its former action. Assurance was given by the pathologists that they are adequately staffed and equipped to handle all work of this nature.

The annual report of the Committee on Medical Service recommending an upward revision of the present allowance for medical services to recipients of government aid was approved. These provided for a general over-all increase of 25 per cent after certain items, against which most complaints have been heard have first been raised. The Committee had met with the Minnesota Division of Social Welfare and discussed this whole matter in May, and will now ask that agency to permit these new allowances to become effective July 1, 1948.

The resolution in regard to vaccination with BCG submitted by the Committee on Medical Education and adopted by the House of Delegates seems worth reporting in full:

RESOLUTION

WHEREAS it is a well-known clinical fact that tuberculosis is a disease against which the human body frequently cannot develop strong, dependable, and permanent immunity, and

WHEREAS the use of BCG vaccine is authoritatively reported to provide a relative immunity of varying degree and duration, and

WHEREAS the American Trudeau Society after extensive consideration has said "BCG vaccine, prepared under ideal conditions and administered to tuberculin-negative persons by approved techniques, can be considered harmless

BE IT THEREFORE RESOLVED that the House of Delegates of the Minnesota State Medical Association approve the use of BCG vaccine in the state of Minnesota,

1. Provided that its use be limited to those persons with negative-tuberculin skin-test reactions who may be exposed to unusual hazards of tuberculous infection greater than the danger experienced by the general population, and

2. Provided that vaccination be carried out under conditions which permit prolonged observation of all vaccinated persons, and

3. Provided that the vaccine employed be obtained from the laboratories approved by the United States Public Health Service or the Minnesota State Board of Health, and

4. Provided that all instances of persons vaccinated with BCG vaccine shall be reported to the Minnesota State Board of Health, and

5. Provided that recognition be given to the fact that the use of BCG vaccine is not a substitute for accepted methods of tuberculosis prevention and control, and should not lead to a relaxation of such precautions.

HADDON M. CARRYER, M.D.
Chairman

The Cancer Committee of the Association submitted an outline of a project to be known as "The Cancer Education Service" of the Cancer Committee of the MSMA. (See June issue, page 674).

In considering this project as outlined by Dr. Wells, Chairman of the Cancer Committee, the Council approved the project subject to the declared principles that clinical material shall be used solely for educational purposes and not for the purpose of obtaining free consultation services, and recommended that the use of cancer teams should be arranged through officials of component medical societies only and that the project shall be termed a Cancer Education Service of the Cancer Committee instead of a Cancer Consultant Service as originally proposed.

BLUE SHIELD REPORT FORMS

AT THE present time Minnesota Blue Shield has many Medical Service Report forms in the hands of physicians throughout the state for listing of the services they have rendered Blue Shield subscribers. The majority of these forms will be returned to the Blue Shield office prompt-

ly; others, however, will be tardy and still others will never be returned. Those that are tardy or are never returned are those about which we are concerned. Those which are not returned cause trouble for the office personnel, the Blue Shield subscriber, and also for the attending physician.

First, the Blue Shield office must carry a reserve for unreported and unpaid claims. The delinquent cases increase the accounting procedure and also require extra checking, in that duplicate Medical Service Reports must be sent out each month in the event the original has been lost, misplaced, or overlooked by the physician. This additional procedure requires additional personnel.

Second, the subscriber will write or call the Blue Shield office to inquire as to when his case is to be paid. It is embarrassing to tell him that the report has not been returned from the physician's office, for in some cases the subscriber has received a statement from the attending physician on which no credit is shown for Blue Shield payment. This makes the subscriber wonder whether this organization is slow or whether it is going to make any payment on his claim. At the present time there are cases pending, dating back to January and February, 1948, that are unpaid merely because the attending physician has not returned the completed Medical Service Report form.

Third, the physician is inconvenienced in that he does not receive his payment as promptly as he could. If the physician's statements are sent out without first returning the Blue Shield form, the subscriber frequently gets the impression that the physician is trying to "put something over" on him and collect from him as well as from Blue Shield. We know that this is *not* the case, but some subscribers are difficult to convince.

To sum up, physicians are urged to complete any forms they may have received from the Blue Shield office and return them as rapidly as possible, so that cases may be paid off in the shortest possible time. The first Minnesota Blue Shield claims were paid off on a monthly basis, but with that system some claims were held about two months before payment could be made. In April the procedure was changed to a weekly pay-off basis which made it possible for more cases to be paid before the physician's monthly statements are sent out. This method has proved very satisfactory in that both the physician and the subscriber are better satisfied with Blue Shield service. By paying weekly no completed claim is held in the office over ten days and the Blue Shield staff is justly proud of this, for there are few if any other plans in the country that can boast of such service.

Once again you are urged to return forms promptly and remember, too, that you also benefit in that the sooner the form is returned, the sooner you get paid.

METOPON AVAILABLE

PHYSICIANS who have had patients suffering from severe and persistent pain have realized the shortcomings of morphine and other opium derivatives for prolonged use because of side-effects, such as emesis, constipation, sedation, acquired tolerance, and addiction. The usual need for hypodermic administration is also an inconvenience.

The discovery by Small in 1936 of a substitution product of morphine methyldihydromorphinone, for which the official name of metopon hydrochloride has been adopted, and the determination of its pain-killing properties on oral administration led the Committee on Drug Addiction and Narcotics of the National Research Council to institute an investigation of its clinical possibilities. Physicians were permitted to obtain metopon directly for clinical trial on cancer patients suffering from pain. Conclusions have been drawn from the experience of over 2,000 physicians with over 4,000 patients and were published by the Council on Pharmacy and Chemistry in the May 22, 1948, issue of *The Journal of the AMA* (page 365).

The report indicates that metopon is a valuable pain killer, even on oral administration, and has little tendency to produce the undesirable side actions commonly experienced with morphine. While not by any means entirely effective in preventing withdrawal symptoms in morphine addicts, it is of some value as a substitute. Its most satisfactory results are obtained if used in the relief of pain before too much reliance has been put upon morphine.

Metopon can now be obtained on prescription at the pharmacies in 3 mg. capsules only. It is a narcotic and subject to the same regulations as other narcotics. Attention is drawn to the min-

(Continued on Page 811)

MEDICAL ECONOMICS

Edited by the Committee on Medical Economics
of the
Minnesota State Medical Association
George Earl, M.D., Chairman

MEDICAL GROUP SEEKS TO UNITE WORLD PHYSICIANS

Doctors of forty-six nations are now represented in an international organization designed to promote health throughout the world—the World Medical Association. Thus another step toward the realization of international understanding and peace through the provision of a means of jointly meeting some of the mutual problems faced the world over has been taken. This association, together with the newly formed World Health Organization, which is now virtually assured full U. S. support, is a bright spot in an otherwise sober international picture.

Created in Paris, September 18, 1947, the World Medical Association had been exactly one year in the making, with thirty-two national medical associations working together to draw up the plans. Prominently figuring in the promotional work is the American Medical Association. Dr. Louis H. Bauer, Hempstead, New York, is one of the ten administrative councilors elected by the delegates to the organization meeting; headquarters of the association will be in New York.

Closest possible liaison with the United Nations Educational, Scientific and Cultural Organization (UNESCO) and with the World Health Organization is to be maintained so as to keep the medical profession throughout the world in touch with these and other groups whose activities lie in medical and health fields.

Seven Basic Objectives

The primary objectives of the World Medical Association have been outlined as follows:

1. To promote closer ties among the national medical organizations and among the doctors of the world by personal contact and all other means available.

2. To maintain the honor and protect the interests of the medical profession.

3. To study and report on the professional problems which confront the medical profession in the different countries.

4. To organize an exchange of information on matters of interest to the medical profession.

5. To establish relations with, and to present the views of the medical profession to, the World Health Organization, UNESCO and other appropriate bodies.

6. To assist all peoples of the world to attain the highest possible level of health.

7. To promote world peace.

There is considerable evidence that these objectives will receive strong world support.

It is significant that Prague, Czechoslovakia, was selected for the 1948 meeting in view of its long medical history. Desirability of a European meeting place stems from the travel problem for delegates from Europe and their inability to afford a long trip. Prague physicians are hoping that an assembly of medical men from all over the world might stimulate a restoration of this former great teaching center.

To Maintain Local Committees

In addition to the general office and secretary in New York, it is planned that the World Medical Association shall have assistant secretaries in strategic areas of the world as well as local committees in each nation.

It is also planned to publish a journal of the activities of the association in three languages—English, French and Spanish. Financing of the association presents certain grave difficulties, it is noted. Some countries restrict their citizens' spending money too extensively outside of their own particular borders, while in other countries there is utter economic chaos. It is not expected that the association will be self-supporting very soon; it will undoubtedly have to rely on financial assistance from outside. Many organizations and individuals have pledged to contribute substantial

sums, which will enable the association to go ahead with present plans.

The Council of the World Medical Association is exploring the possibility of making arrangements whereby funds advanced to the association will not be taxed by the respective countries.

Participating Nations Listed

In addition to the United States, forty-five nations are participating in the World Medical Association: Argentina, Australia, Austria, Belgium, Brazil, Bulgaria, Canada, Chile, China, Colombia, Costa Rica, Cuba, Czechoslovakia, Denmark, Egypt, Ecuador, France, Great Britain, Greece, Guatemala, Honduras, Hungary, India, Iraq, Ireland, Italy, Luxembourg, Mexico, Netherlands, Nicaragua, Norway, Palestine (both Arab and Jewish states), Panama, Peru, Poland, Portugal, Puerto Rico, San Salvador, Spain, Sweden, Switzerland, Turkey, Uruguay, and Venezuela.

Out of courtesy to the nation entertaining the organizational meeting of the World Medical Association, Professor E. Marquis, Director of the School of Medicine of Rennes, France, was elected first president. Dr. Thomas C. Routley, Canada, was chairman of the organizing committee. Dr. Charles Hill, secretary of the British Medical Association, was elected honorary secretary until such time as a permanent secretary is appointed; Dr. Otto Leuch, Switzerland, is honorary (temporary) treasurer.

One of the first resolutions to be passed by the new group is one which gives strong evidence of the humanitarian motives behind the new association. It is to be presented for acceptance by physicians throughout the world:

> My first duty, above all other duties written or unwritten, shall be to care to the best of my ability for any person who is entrusted to or entrusts himself to me, to respect his moral liberty, to resist any ill treatment that may be inflicted on him, and, in this connection, to refuse my consent to any authority that requires me to ill-treat him.
>
> Whether my patient be my friend or my enemy, even in time of war or in internal disturbances, and whatever may be his opinions, his race, his party, his social class, his country, or his religion, my treatment and my respect for his human dignity shall be unaffected by such factors.

PUBLIC HEALTH DISCUSSED AT 95TH ANNUAL MEETING

A prominent feature of the ninety-fifth annual meeting of the Minnesota State Medical Association, held in Minneapolis last month, was an afternoon session devoted to a discussion of public health problems.

Health was viewed as a continuing job, which, as our standards continue to advance, will always remain unfinished. A panel of distinguished speakers, each of whom was qualified by wide experience in his particular field, presented the viewpoint that health is not merely the physical condition of an individual; it embraces, rather, a number of important factors — employment, wages, education, housing, standards of living, physical facilities—and a host of other considerations.

Speakers included Dr. John O. Christianson, superintendent of the University of Minnesota School of Agriculture; Dr. Lloyd E. Harris of the Section on Pediatrics of the Mayo Clinic and the Rochester Child Health Institute; Dr. Robert L. Novy, Detroit, president of Michigan Medical Service; and Dr. Morris Fishbein, Chicago, editor of the *Journal of the American Medical Association*. Senator Ball was to have appeared, but because of the press of legislative duties, he had to cancel out. His prepared talk was read by Dr. Reuben F. Erickson, Minneapolis, chairman of our State Committee on Public Policy.

Meeting Well Attended

Approximately 500 persons attended the public health meeting, to which allied professionals as well as the public at large were invited.

Dr. Christianson told of the part which the leaders of farm and rural groups must play in promoting health and urged that the medical profession continue its efforts to extend health education. Dr. Novy outlined the need for the spread of voluntary health insurance as a method of budgeting for medical and hospital expenses.

Bringing a healthy child into the world and keeping him healthy in mind and body was described by Dr. Harris as the real "first line of defense" in this country. He pointed out that every child should have the best possible start in life, which includes adequate prenatal and childbirth care for every mother; proper attention throughout infancy—scientific nutrition, immunization

against preventable disease and proper mental environment—as well as watchful guidance throughout childhood. These aims, he pointed out, are among several included in the over-all health program of the American Medical Association, which the medical profession stands ready to carry out with the help of an intelligent public.

Federal Program Unlikely

Senator Ball's message revealed that compulsory health insurance does not stand a chance of being enacted by the Eightieth Congress. He said that "the whole trend in Congress in the past three years has been away from further experiments in socialization rather than toward them."

Mr. Ball outlined some of his own views as to the development of a "sound federal health program" including "a positive rather than a negative approach to health . . . co-ordination of veterans medical care and the public health service . . . expansion in research . . . federal aid for more adequate sewage disposal where needed . . . health education . . . and further assistance to states for medical care for indigents."

Senator Ball concluded that "the United States will achieve far greater and more rapid progress in the field of public health, as in others, if it sticks to the principles of freedom through which so much has already been achieved."

Teamwork in Health Cited

The "magnificent teamwork" of people in the health professions has enabled the United States to reach its present outstanding standard of health, Dr. Fishbein told the conference.

He paid tribute to the countless workers who have contributed to U. S. health—physicians, public health workers, social workers, hospital administrators, technicians, clinical pathologists, sanitary engineers, entomologists, nurses, dieticians, and medical record librarians. He cited particularly the work done in the field of tuberculosis as one of the conspicuous examples of what he termed "teamwork in the conservation of human resources."

The outstanding feature of American medicine today, Dr. Fishbein declared, is its continuation in the field of what is commonly called private enterprise. He then pointed to the importance of the general practitioner to the maintenance of our present system of medical care.

"The general practitioner is the functioning unit of American medicine," Dr. Fishbein said. "Upon him devolves the duty of being the first to detect disease and the first to give proper care for the vast majority of conditions for which people consult doctors."

Dr. Fishbein concluded that "in every phase of medical care in our nation today there is teamwork. It is a teamwork that has grown out of the needs of man, but principally out of the advancement of medical science and a recognition of the necessity for co-operation, co-ordination and integration for maximum achievement."

REGIONAL HEALTH DAY MEETINGS PLANNED

The State Medical Association, the Woman's Auxiliary and the Minnesota Department of Health have joined forces in planning a series of regional health day meetings this fall to include every section of Minnesota. Eight such meetings are to be scheduled in the following locations: Bemidji, Crookston, Duluth, Fergus Falls, Mankato, Rochester, St. Cloud and Willmar.

Sponsored by the local medical societies and their auxiliaries and the public health department personnel in each community, local citizen participation and interest will be actively sought in the round-table and general meeting discussions on timely health topics for which the profession will serve as consultants.

METOPON AVAILABLE

(Continued from Page 808)

imal initial dose of 6 mg. for patients who have not been taking other opium derivatives, if satisfactory analgesic effect is to be expected. Those who have had previous opiates will probably need 9 mg. or more initially. Effects are said to last from five to ten hours, and repeat doses and intervals depend on various factors, those who have had previous narcotic medication requiring larger and more frequent doses. In substituting metopon for other opiates, rapid reduction rather than abrupt discontinuance of the previous medication is advisable.

In Memoriam

JOHN C. M. BRUST

Dr. John C. M. Brust, who was a fellow of the Mayo Foundation in 1932 and received an M.S. in proctology from the University of Minnesota in 1934, died May 14, 1948, in Syracuse, New York.

WILLIAM CHARLES EHMKE

Dr. William C. Ehmke of Willow River, Minnesota, passed away at his home on May 9, 1948, following a heart attack.

Dr. Ehmke was born January 20, 1881, in Le Sueur County, Minnesota. He attended Le Sueur High School and obtained his M.D. degree at the Minneapolis College of Physicians and Surgeons in 1905. In 1906, he went to Willow River as the company doctor for the Atwood Lumber Company. He practiced there until his death. He was a member of the East Central Medical Society, the Minnesota State and American Medical Associations.

On the occasion of his sixty-fifth birthday, January 20, 1946, the people of Willow River celebrated in his honor the completion of forty years of distinguished service to the community. During that time he had been very active in civic affairs. He was mayor for over twenty years and a member of the school board for over thirty years, acting most of the time as president of the board.

On November 28, 1907, Dr. Ehmke married Pearl Soliday. He is survived by his wife and three sons, William and Lyle of Willow River and Donald of Willmar; one brother and three sisters.

GEORGE B. HAMLIN

Dr. George B. Hamlin of Minneapolis died at his home May 3, 1948. He was seventy-seven years of age.

Dr. Hamlin was born in Minnesota on February 10, 1871. He was a University of Minnesota Medical School graduate, having received his degree in 1896.

He was a member of the Hennepin County Medical Society, the Minnesota State and American Medical Associations. He had received the certificate of recognition for fifty years of medical practice from the Minnesota State Medical Association.

Dr. Hamlin is survived by his wife, two sons, Lehan and Maurice of Minneapolis, and a brother, Ernest T. Hamlin of Santa Barbara, California.

SERGEANT P. MARTIN

Dr. Sergeant P. Martin, a fellow in surgery at the Mayo Foundation from 1913 to 1917, died January 8, 1948, in Kenmore, New York, at the age of sixty-one. Dr. Martin practiced urology in Buffalo, New York, after leaving the Mayo Clinic.

JOHN C. SERKLAND

Dr. John C. Serkland, a practitioner at Rothsay, Minnesota, since 1900, died on May 9, 1948, at the age of seventy-six.

Dr. Serkland was born February 23, 1872, at St. James, Minnesota. After receiving his M.D. degree at the University of Minnesota in 1900, and after a short period of practice in Minneapolis, he located at Rothsay.

In June, 1904, Dr. Serkland and Berthe Seline Pedersen of Rothsay were united in marriage. Mrs. Serkland passed away in 1912. They were blessed with three children, Alice, Alvin and Chester, who are all living. In 1920, Dr. Serkland married Anna Langeland, who survives him.

Dr. Serkland was a member of the Park Region District and County Medical Society, the Minnesota State and American Medical Associations. Besides giving devoted medical care to his locality, he was much interested in civic affairs, serving two terms as mayor of the village, was a member of the council and school board, and was a trustee of the Hamer Lutheran church. He held membership in the Sons of Norway, the Lutheran Brotherhood and the IOOF. According to the *Rothsay Argus*, "Dr. Serkland's complete honesty and sincerity carried him the friendship and respect of his community and of a wide circle of acquaintances in this area. The memory of their family doctor will long remain with the people on the farms and in the village of Rothsay."

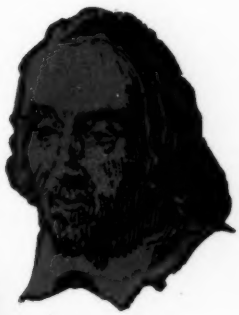
GEORGE ELMER STROUT

Dr. G. Elmer Strout of Minneapolis died at his home, May 10, 1948, at the age of seventy-four.

Dr. Strout was born in Fargo, North Dakota, December 23, 1873. He graduated from the University of Minnesota Medical School in 1901, where he was a member of Phi Delta Theta and Nu Sigma Nu fraternities. He had practiced ophthalmology and otolaryngology in Minneapolis since 1917 and had been an associate professor at the University of Minnesota Medical School for some ten years. He was also associated with the Nicollet Clinic. A member of the Hennepin County Medical Society, he was also a member of the Minnesota State and American Medical Associations. Dr. Strout was also a director of the Wells Memorial house, a Mason, and a member of the Zuhrah Temple of the Shrine and the Minneapolis Club of St. Mark's Cathedral.

Dr. Strout is survived by his widow and a daughter, Mrs. Jack B. Hall of Minneapolis, and four brothers.

MILESTONES IN CARDIORESPIRATORY HISTORY



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Of General Interest

Among members recently re-elected to the executive board of the Minneapolis Health Action Committee were Dr. E. J. Hunekens and Dr. Charles E. Merkert, while Dr. Clare Gates was elected secretary of the group.

* * *

"Lesions of the Optic Chiasm" was the title of a paper presented by Dr. Charles W. Rucker, Rochester, at a meeting of the Chicago Ophthalmological Society in Chicago late in May.

* * *

Dr. James A. Mason, who practiced medicine in International Falls before entering the army in 1940, recently established a practice in Portland, Oregon. He is confining his practice to the field of orthopedics.

* * *

Dr. Isadore Fisher, a former Ceylon physician, received an M.S. degree in dermatology and syphilology from the University of Minnesota at the June commencement exercises.

* * *

"What's New in the Treatment of Rheumatic Diseases" was the title of a paper presented by Dr. Charles H. Slocumb, Rochester, at a meeting of the American Academy of General Practice in St. Louis, Missouri, late in May.

Dr. A. H. Field of Farmington was confined to St. Joseph's Hospital in Saint Paul for a week during May while being treated for an allergic reaction to penicillin. He returned to his Farmington practice on May 13.

* * *

Appointment of Dr. L. N. Dale, Red Lake Falls, as coroner of Red Lake County, was announced on May 20 by the county board of commissioners. Dr. Dale's term of office will expire December 31, 1950.

* * *

A Lake Park physician, Dr. R. Hendrickson, was named a member of a Citizens' Health Committee appointed on May 27 by Governor Luther Youngdahl to formulate plans for caring for the state's mentally ill.

* * *

"X-Ray Therapy" was the subject of an address by Dr. J. R. McNutt, Duluth, at a meeting of the Arrowhead Society of X-Ray Technicians on May 26 in St. Mary's Hospital in Duluth.

* * *

Among speakers at the twentieth annual meeting of the American Society of X-Ray Technicians, held in Minneapolis during the first week of June, was Dr. John D. Camp, Rochester, who described a grid-front cassette

(Continued on Page 816)

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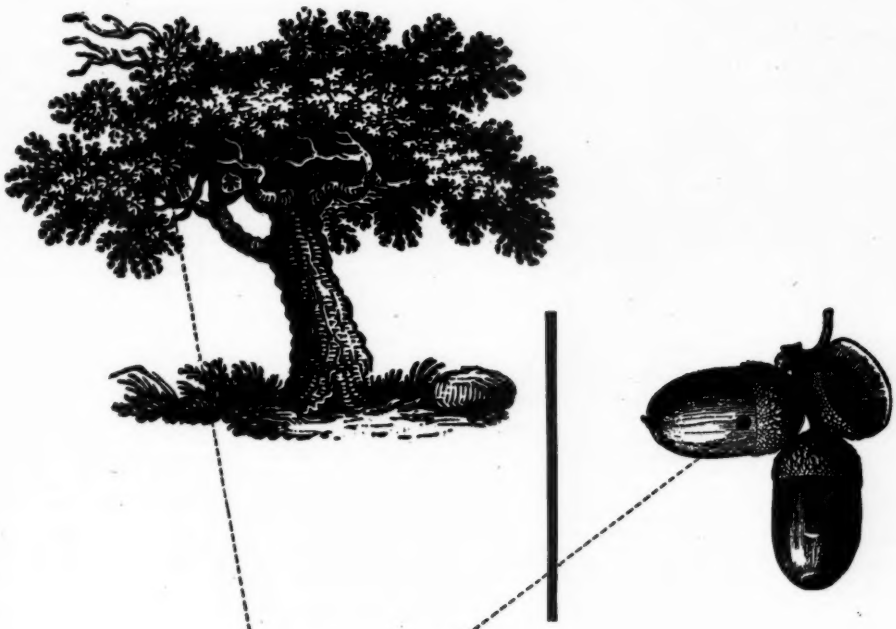

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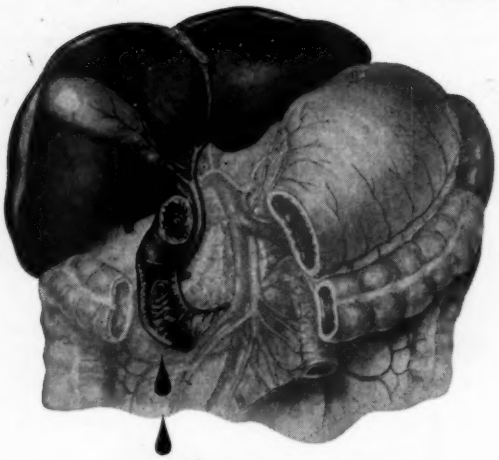

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*Albrecht, F. K.: Modern Management in Clinical Medicine, Baltimore, The Williams and Wilkins Co., 1946, p. 170.

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(Continued from Page 814)

which he had developed. Approximately 600 delegates to the convention from all parts of the United States, Canada and Hawaii attended the meeting.

* * *

Due to incorrect information, it was announced in the June issue that Dr. H. Robert Ransom was leaving Osseo to establish practice in Crosby. Word has come from Dr. Ransom that he is remaining in Osseo, where he is associated in practice with Dr. T. J. Bloedel.

* * *

The Jaracki Memorial Lecture was delivered by Dr. Virgil S. Counseller, Rochester, at Jewish Hospital in Philadelphia on May 22. The title of Dr. Counseller's lecture was "A Clinical and Surgical Review of Vesicovaginal Fistula."

* * *

Construction work began early in June on a 35-foot addition to Dr. Robert A. Glabe's office building in Plainview. To be part of the new addition are rooms for diagnostic equipment and records, a darkroom, a minor surgery room and a recovery room.

* * *

During June, Dr. Walter S. Neff of Virginia attended a postgraduate course in "Physiological Basis for Internal Medicine," which was presented by the American College of Physicians at the University of Illinois College of Medicine.

* * *

An M.S. degree in physiology was awarded to Dr. John W. Braasch, Rochester, on June 18 at the commencement exercises of the University of Illinois Chicago Professional College. Dr. Braasch is the son of Dr. and Mrs. W. F. Braasch of Rochester.

* * *

After a year in association with Dr. A. D. Hoidale and Dr. W. G. Workman in Tracy, Dr. O. J. Esser closed his practice early in June and returned to his previous residence in New Ulm. He planned an extended vacation before resuming his professional work.

* * *

"Child Care" was the title of a talk given by Dr. F. H. Walter of International Falls at a meeting of the Women of Moose Chapter in International Falls on May 26. Dr. Walter is affiliated with the International Falls Clinic.

* * *

Dr. Anthony Rosyzki, formerly of Blackduck, was recently discharged from the army after being stationed for a year at Honolulu. Dr. Rosyzki, visiting in Bemidji in June, planned to locate some place in Minnesota to begin his practice.

* * *

During June, Dr. Chester Thiem maintained the practice purchased in Gibbon by Dr. John Glaeser, thus providing Gibbon with a physician until Dr. Glaeser was discharged from the army. After July 1, Dr. Thiem began work at Ancker Hospital in Saint Paul.

* * *

Early in June, Dr. Albert E. Krieser announced the opening of offices for the practice of medicine and surgery in Mankato. His practice will be directed primarily to the diagnosis and treatment of diseases of the chest.

(Continued on Page 818)

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Surgical Anatomy and Clinical Surgery, two weeks, starting August 16, September 27.
Surgery of Colon and Rectum, one week, starting September 20, October 18. Surgical Pathology every two weeks.

FRACTURES AND TRAUMATIC SURGERY—Intensive Course, two weeks, starting October 25.

GYNECOLOGY—Intensive Course, two weeks, starting September 13, October 11.
Vaginal Approach to Pelvic Surgery, one week, starting September 27.

OBSTETRICS—Intensive Course, two weeks, starting September 27, October 25.

UROLOGY—Intensive Course, two weeks, starting September 27.

MEDICINE—Intensive Course, two weeks, starting October 11.
Personal Course in Gastroscopy, two weeks starting July 12, September 27.
Electrocardiography and Heart Disease, two weeks, starting August 2.
Electrocardiography and Heart Disease, four weeks, starting September 13.

DERMATOLOGY—Formal Course, two weeks, starting October 4.
Clinical Course every two weeks.

OPHTHALMOLOGY—Intensive Course, two weeks, starting September 20.
Refraction Methods, four weeks, starting October 11.
Ocular Fundus Diseases, one week, starting November 15.

OTOLARYNGOLOGY—Intensive Course, two weeks, starting October 18.

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(Continued from Page 816)

A graduate of the University of Loyola School of Medicine, Dr. Krieser practiced for a short time in Mankato before enlisting with the Mankato National Guard unit in 1941. After five years in the army medical corps, he was discharged and became a staff physician at the Ah Gwah Ching Sanatorium.

* * *

The role of psychosomatic medicine in literature was discussed by Dr. Frances J. Braceland, consulting psychiatrist at the Mayo Clinic, at a meeting of the Minnesota Assocation of Hospital and Medical Librarians on June 3 in Minneapolis.

* * *

Among speakers at the Sixth District meeting (part of the Wisconsin State Medical Society) in Green Bay, Wisconsin, on June 12 was Dr. H. E. Michelson, professor of dermatology at the University of Minnesota, who discussed "Dermatology for General Practitioners."

* * *

Two papers were presented by Dr. J. Arnold Bargen, Rochester, at a meeting of the New Mexico State Medical Society in Las Vegas, New Mexico, on June 3 and 4. Titles of the papers were "Management of Lesions of the Small Intestine" and "Management of Intestinal Obstruction."

* * *

It was announced on June 9 that Dr. Donald C. Balfour, director emeritus of the Mayo Foundation, had been elected a member of the Carleton College board of trustees at a meeting of the board on June 7. In 1934 Carleton College conferred upon Dr. Balfour the honorary degree of Doctor of Laws.

* * *

An "Outstanding Achievement" medal was presented by the University of Minnesota to Dr. William W. Will of Bertha at an alumni dinner on June 11 in Coffman Memorial Union. Dr. Will was recently named by the Minnesota State Medical Association for the AMA award for outstanding general practitioner.

* * *

A new physician in Excelsior is Dr. Elaine McKenzie, who recently became associated in practice with Dr. Lewis M. Reid of that city. A graduate of the University of Minnesota Medical School, Dr. McKenzie served her internship at Minneapolis General Hospital. She is married to Roy R. McKenzie, a chemical engineer.

* * *

Guest speaker at the annual dinner meeting of the Otter Tail County Public Health Nursing Service, held June 3 at Fergus Falls, was Dr. Hilbert Mark, director of the division of tuberculosis of the Minnesota Department of Health. Dr. Mark outlined the procedure for organizing the county for a mass chest x-ray survey.

* * *

Eleven Minnesota physicians were among the speakers at the forty-fourth annual meeting of the National Tuberculosis Association in New York during the middle of June.

In the group were Dr. H. Corwin Hinshaw, Rochester; Dr. William Roemmich, Hennepin County tuberculosis

(Continued on Page 820)

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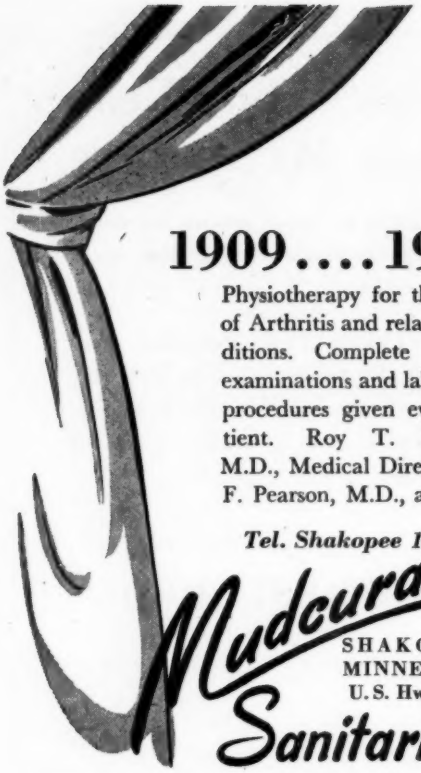

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(Continued from Page 818)

control officer; Dr. F. J. Hill, Minneapolis health commissioner; Dr. Thomas J. Kinsella, Minneapolis; Dr. E. S. Mariette, medical director of Glen Lake Sanatorium, and Dr. Sumner S. Cohen, Dr. L. M. Larson, Dr. P. M. Mattill, Dr. F. C. Nemec, Dr. E. P. K. Fenger and Dr. V. K. Funk, staff members of Glen Lake Sanatorium.

* * *

Dr. Elmer C. Paulson, formerly of Elbow Lake, moved to Minneapolis late in June after receiving an appointment to a fellowship in radiology at the University of Minnesota Medical School. Dr. Paulson, a Fergus Falls resident before the war, had opened a practice in Elbow Lake following his discharge from the army in 1946.

* * *

It was announced in Bemidji on May 20 that Dr. G. A. Miners, formerly of Deer River, had arrived in Bemidji to assume the duties of director of District 1, Minnesota Department of Health. Dr. Miners fills the position previously held by Dr. P. T. Watson, who was transferred to the state office in Minneapolis in January, 1947.

* * *

Five Edina (Minneapolis suburb) physicians offered their services early in June in conducting free examinations of all youngsters participating in the Edina Park Board's supervised swimming classes at Lake Calhoun. The physicians who volunteered to perform physical examinations were Dr. Francis M. Walsh, Dr. Mary Galligan, Dr. Robert Tinkham, Dr. C. V. Rockwell and Dr. I. H. Moore.

* * *

The seventy-fifth birthday anniversary of Dr. C. S. Bossert, Mora, was celebrated by a surprise dinner party for him at the Braham Hospital on May 27. Dr. Bossert has been a staff member of the hospital since it opened in December, 1947. A graduate of the University of Pennsylvania in 1908, Dr. Bossert has been located in Mora since 1914.

* * *

The sixteenth annual convention of the American Society of Medical Technologists was held in Saint Paul during the week of June 7. About 500 delegates from throughout the country attended. Convention activities included a seminar in hematology at the University of Minnesota Continuation Center and a trip through the Mayo Clinic in Rochester.

* * *

Principal speaker at the first annual countywide Public Health Dinner, held in St. James on May 19, was Dr. R. N. Barr of the Minnesota Department of Health. Speaking on the topic, "Economic Conditions of Public Health," Dr. Barr explained how money for public health is used and how public health districts are set up. He also described some of the recent health legislation.

* * *

After thirty-six years of school service in Tracy—twenty-four of the years as president of the school board—Dr. W. H. Valentine was honored at a ceremony on May 28 by members of the local high school senior

(Continued on Page 822)

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(Continued from Page 820)

class and by the Tracy Civic and Commerce Association. In observation of his retirement from the school board, scheduled for July 1, Dr. Valentine was presented with an honorary plaque and a desk pen set.

* * *

The Hopkins post of the Veterans of Foreign Wars planned to honor Dr. James Blake, pioneer Hopkins physician, in a special ceremony during the 1948 Raspberry Festival, an annual celebration in the city. Three of Dr. Blake's sons, physicians all, Drs. James A., Allan and Paul, are members of the Hopkins VFW post. Details of the ceremony had not yet been worked out at the time announcement was made of the proposed honor.

The degree of doctor of science (opthalmology) was conferred upon Dr. Bourne Jerome, Minneapolis, by the University of Pennsylvania on June 9. The degree was granted for graduate work carried on at the school by Dr. Jerome both before and after service in the recent war. A graduate of the University of Minnesota Medical School in 1935, Dr. Jerome is associated in the practice of opthalmology with Dr. Karl E. Sandt and Dr. W. J. Bushard, Minneapolis.

* * *

The President's Certificate of Merit was presented to three Mayo Clinic staff members in a ceremony at Rochester on May 18. Receiving the award were Dr. Earl H. Wood, Dr. Edward H. Lambert and David M. Clark. Mr. Clark is a textile engineer who worked with the two doctors in developing a pilot's anti-blackout g-suit. Presentation of the Certificate of Merit was made by Rear Admiral F. L. Conklin, commandant of the ninth naval district.

* * *

Principal speaker at the third annual medical conference sponsored by the Minnesota American Legion at Fort Snelling on June 10 was Major General Carl R. Gray, Jr., national head of the Veterans Administration. The conference, to discuss the present and future status of medicine and hospitalization for veterans, was attended by veterans' officials from Minnesota, North Dakota, Nebraska and Iowa, and by physicians from the University of Minnesota Medical School and the Mayo Clinic.

* * *

On May 20, Dr. J. F. DuBois of Sauk Centre was reappointed by Governor Luther Youngdahl as a member of the State Board of Medical Examiners. First appointed to the board in 1927, Dr. DuBois will serve for a seven-year term.

Earlier in the week, at a meeting of the Sauk Centre Rotary Club, Dr. DuBois said that over-specialization in medicine is leading towards socialism. "Our system grew up around the family doctor," he stated. "If everyone specializes, there will be only one agency which can afford medical care. That is the government—in other words, socialized medicine." He said that socialized medicine would be "the entering wedge for socialism

(Continued on Page 824)

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(Continued from Page 822)

throughout the country." He urged that the best way to meet problems of medicine was by internal action of the profession itself against over-specialization and by preparatory plans on the part of the general public to insure themselves in recognized hospitalization and health plans.

* * *

Honored at the recent meeting of the Minnesota State Medical Association for completing fifty years of medical service in the state were thirteen Minnesota physicians.

The thirteen practitioners, each with at least fifty years of state practice to his credit, were Dr. Gerhard A. Dahl, Mankato; Dr. William F. C. Heise, Winona; Dr. Aloysius S. Fleming, Dr. Axel E. Hedback, Dr. John R. Peterson, Dr. Carl J. Lind and Dr. N. H. Sheldrup, all of Minneapolis; Dr. Leon A. Williams, Slayton; Dr. Frank E. Burch, Dr. James S. Gilfillan and Dr. Asa M. Johnson, all of Saint Paul; Dr. Joseph G. Parsons, Crookston, and Dr. William J. Torgerson, Oklee.

* * *

Golfers who complain at driving five or ten miles to play golf should consider the determination of Dr. J. J. Catlin of Buffalo. He drives ninety miles for a game of golf, and does it two or three times a week!

Always on Thursday and usually on Sundays and Wednesdays, the sixty-seven-year-old physician makes the forty-five mile jaunt from Buffalo to the Twin Cities to try out the various Saint Paul and Minneapolis courses. In addition, he plays almost every evening on the Buffalo golf course. Dr. Catlin, who didn't start playing golf until he was over forty, says that golf is the "best medicine in the world. I tell all my patients to try it." He usually shoots in the 80's.

* * *

HOSPITAL NEWS

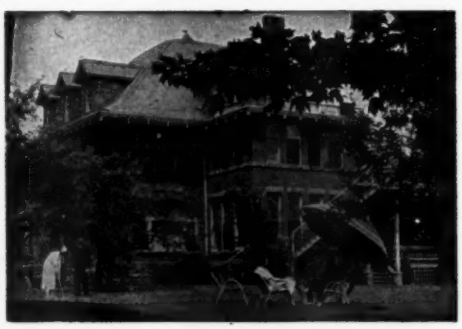
Articles of incorporation were being drafted early in June for the Aitkin Community Hospital Association. Decision to incorporate was made at a meeting in Aitkin on May 21, attended by members of the local hospital committee and interested citizens. The incorporators were made up of a nine-man board of directors.

* * *

With the resignation of Miss Inez Lewison as superintendent of Northfield City Hospital, effective July 1, the Northfield hospital board in May appointed Mrs. Myron Ellingboe to the position. Miss Lewison resigned to become surgical supervisor of a new sixty-bed hospital in Glencoe. Mrs. Ellingboe has been assistant superintendent of the Northfield hospital for the past two years.

* * *

At the annual meeting of the board of trustees and members of the association of the Community Hospital in Princeton on June 8, it was announced that the small hospital had not only stayed on the black side of the financial ledger during most of 1947 and part of 1948 but had shown a profit of $2,750 for the period.



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More than 1,000 hospital officials from throughout the Northwest and Manitoba, Canada, met for a hospital conference in Minneapolis during the first week of June. Among the speakers at the meeting was Dr. Charles W. Mayo, Rochester, who spoke at a dinner meeting of the group on June 4.

* * *

BLUE SHIELD NEWS

Persons covered by Blue Shield as of June 15, 1948—26,369
Number of Blue Shield cases paid on June 15, 1948—201
Total for 1948—553

Amount paid on Blue Shield cases on June 15, 1948—$ 7,083.50
Total for 1948— 20,486.16

At the convention of the Minnesota State Medical Society June 7, 8, and 9, 1948, in the Minneapolis auditorium, the Minnesota Blue Shield exhibit consisting of material pertaining to the Blue Shield plan was set up mainly to answer questions raised by the doctors attending the convention and also to enroll any doctors who were not Blue Shield participating doctors of medicine. Of the few additional doctors who were signed up, it was found that they had either just completed their internship or recently returned from service. We are very glad to add their names to the roll of Blue Shield participating doctors of medicine.

There were many requests for information pertaining to Blue Shield. The largest request was for Blue Shield representatives to visit the towns and also for them to call at the doctor's office for discussion. As a result all representatives have been instructed to call on the doctors in the towns they visit, so calls from them can be expected.

A frequent query was, "When is Blue Shield going to be offered in our town?" It will be offered in all towns just as soon as possible. At the present time there are twenty representatives in the state. We know this number is inadequate, but more are being put on all the time. At present these representatives are only following up groups that have requested enrollment, because we feel that it is only fair that the established groups should have Blue Shield first. In the Blue Shield office there are hundreds of cards requesting representatives to discuss enrollment with groups, and these requests are getting first priority. Therefore, if a representative does not get to your town immediately, please be patient, for one will be there soon.

It was suggested by some of the doctors attending the convention that material be supplied for their waiting rooms. Blue Shield literature for this purpose is being prepared and will be sent to you.

When the Blue Shield representative calls on you please give him any requests you may have received for group enrollment, also ask him any questions you may have or give him any suggestions. He will return them to this office and necessary action will be taken.

May we again state that this is your plan and it is within your power to make or break it. Those of us in the office do not know how you feel about Blue Shield unless you voice your opinions. We are always open to suggestions and want them. So help us make your plan the best.

Reports and Announcements

IDAHO STATE MEDICAL ASSOCIATION

The entire guest faculty for the fifty-sixth annual session of the Idaho State Medical Association, held July 6 through 8 at Sun Valley, Idaho, consisted of five University of Minnesota Medical School staff members. The five lecturers were Dr. Owen H. Wangensteen, director of the department of surgery; Dr. Donald W. Hastings, chief of psychiatry and neurology; Dr. Edward P. Burch, assistant professor of ophthalmology; Dr. Frederick W. Hoffbauer, assistant professor of medicine, and Dr. Leonard A. Lang, clinical assistant professor of obstetrics and gynecology.

MINNESOTA SOCIETY OF INTERNAL MEDICINE

The semi-annual meeting of the Minnesota Society of Internal Medicine was held as a one-day session in Duluth on June 5. Fourteen papers and discussions comprised the program, which was presented at St. Mary's Hospital.

In charge of the session was Dr. D. W. Wheeler, Duluth, president of the society. Among papers presented by Duluth physicians were "Acute Coccidioidomycosis" by Dr. Sam H. Boyer, Jr.; "Acute Coronary Inadequacy" by Dr. Robert L. Nelson; "Hyperparathyroidism" by Dr. J. J. Coll, and "A Ten-Year Review of Seventy-five Cases of Uremia" by Dr. Arthur H. Wells and Dr. William D. Coventry. Other scientific discussions were given by physicians from Rochester and the Twin Cities.

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FEE SCHEDULES FOR PUBLIC AGENCIES

(Continued from Page 758)

to render better medical care to groups cared for from public funds, and while we want free choice of physician and fee for service, we must accomplish this in both an efficient and an ethical manner. Eventually what is best for the public will be best for the medical profession. Our plans must include the full use of existing institutions such as state hospitals for insane and tuberculous as well as charitable institutions. In particular, plans must be made to provide our teaching institutions with ample teaching material.

The medical profession will need to accept the entrance of the agencies into this effort. To them must go the responsibility for determining who is entitled to care. Also to them must go the right to infringe on free choice of physician. In Nebraska very definite limitations are placed on what osteopaths, chiropractors and optometrists can do. Likewise, some limitation must be placed on what doctors of medicine can do. All doctors are certainly not capable of rendering all types of medical care. In special cases, specialists' care must be obtained. The officers of the agencies will need to have directive authority in these cases. Here, in particular, the medical profession must give wise and conscientious counsel, and this counsel must be accepted by the agencies.

The Nebraska State Medical Association is suggesting that agencies paying for medical service from public funds, and members of the medical profession, study our schedule carefully; that they use it in making agreements for medical service; that in cases where the printed fees seem too high or too low, they bargain only on where to place the unit value; that information as to agreements be promptly forwarded to the state medical office. We also request of the profession that suggestions as to changes in the number of credits be sent to the state medical office.

This effort can come to naught, or it can be an instrument of advantage to all and an important step toward better relationship between the medical profession and the public.

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BOOK REVIEWS

Books listed here become the property of the Ramsey, Hennepin and St. Louis County Medical Libraries when reviewed. Members, however, are urged to write reviews of any or every recent book which may be of interest to physicians.

CLINICAL LABORATORY METHODS AND DIAGNOSIS. Fourth Edition. R. B. H. Gradwohl, M.D., D.Sc., F.R.S.T.M. & H. (London). Director of Gradwohl Laboratories and Gradwohl School of Laboratory Technique; Pathologist to Christian Hospital; Director Research Laboratory, St. Louis Metropolitan Police Department, St. Louis, Mo.; Commander Medical Corps, U. S. Naval Reserve, Ret.; Fellow American Public Health Association; and Dr. Pedro Kouri, Director Institute of Tropical Medicine; Professor of Parasitology and Tropical Medicine; Vice-Dean of the Faculty of Medicine, Havana University; Director of Laboratories Kuba, Havana, Cuba. Vols. I and II, 2284 pages and Index 127 pages; Vol. III, 864 pages. Illus. Price, 3 Vols., $40.00, cloth. St. Louis: C. V. Mosby Co., 1948.

CORRELATED NEUROANATOMY. Fourth Edition Revised. Joseph J. McDonald, M.S., M.Sc.D., M.D., Joseph G. Chusid, A.B., M.D., and Jack Lange, M.S., M.D. 156 pages. Illus. Price $3.00, paper cover. Palo Alto: University Medical Publishers, 1947.

HANDBOOK OF OPHTHALMOLOGY. Everett L. Goar, A.B., M.D., F.A.C.S. Professor of Ophthalmology, Baylor University College of Medicine, Houston, Texas. 166 pages. Illus. Price $5.50, cloth. St. Louis: C. V. Mosby Co., 1948.

CLINICAL OPHTHALMOLOGY. For General Practitioners and Students. H. M. Traquair, M.D., F.R.C.S., Ed. Consulting Ophthalmic Surgeon, Royal Infirmary, Edinburgh, Ophthalmic Surgeon, Chalmers Hospital, Edinburgh, Oculist to the Edinburgh Municipal Hospitals; late lecturer on Diseases of the Eye, Edinburgh University. 264 pages. Illus. Price $9.00, cloth. St. Louis: C. V. Mosby Co., 1948.

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FOR SALE—Complete set of Tice—Practice of Medicine, with all revisions to date; in excellent condition. Price $75.00. John Paulson, M.D., 610—11th St. S.W., Rochester, Minnesota.

FOR SALE—Long-established unopposed southern Minnesota practice; town of 500; good schools and roads; large territory; low rent. Specializing. Address E-92, care MINNESOTA MEDICINE.

FOR SALE—Complete x-ray equipment in good condition; also all-Victor electrical treatments, several pieces. Pay for Bucky, x-ray table and equipment, and all rest will be thrown in. Time to pay, if desired. Bargain. Address E-61, care MINNESOTA MEDICINE.

WANTED—Young physician capable of doing general practice, including surgery, at Sunburst, Montana. Monthly retainer fee from an oil company. Paved road to nearby hospital. Good opportunity for immediate income. Write E-72, care MINNESOTA MEDICINE.

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FOR RENT—Office space available for two or three doctors in new building at 1020 Plymouth Avenue, Minneapolis. Call Dr. J. L. Krishof, HY 6180, for information.

WANTED—Young physician as associate or partner or to buy very good general practice twenty-five miles from Twin Cities. Address E-96, care MINNESOTA MEDICINE.

WANTED—Doctor as associate in general practice in Saint Paul. Good income at once, partnership. Address E-95, care MINNESOTA MEDICINE.

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WANTED—General practitioner for small, well-equipped clinic. Excellent opportunity guarantee with partnership offered. Address E-93, care MINNESOTA MEDICINE.

WANTED—Doctor to take over my general practice next September and October. Address E-84, care MINNESOTA MEDICINE.

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